



# ***STIC Search Report***

***EIC 1700***

**STIC Database Tracking Number: 186155**

**TO: Jill M Gray**  
**Location: REM 10C64**  
**Art Unit : 1774**  
**April 21, 2006**

**Case Serial Number: 09/857600**

**From: Les Henderson**  
**Location: EIC 1700**  
**REMSEN 4B30**  
**Phone: 571/272-2538**  
**Leslie.Henderson@uspto.gov**

## **Search Notes**



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Jill Gray Examiner #: 66983 Date: 4/19/06  
Art Unit: 1774 Phone Number: 301-534 Serial Number: 09/257-600  
Mail Box and Bldg/Room Location: 10064 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Steel Wire with Bright Looking Surface  
Inventors (please provide full names): Adriaensen, Ludo ; Leplae, Alain ;  
Vandewalde, Gerard ; Van Looy, Gilbert  
Earliest Priority Filing Date: 12/15/98

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Pls Search claims in particular steel wire w/  
polyester coating. Also, pls note claim 31.

Thank J. Gray

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Cntr.  
APR 19 REC  
Pat. & T.M. Office

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>SH</u>	NA Sequence (#) _____	STN <u>\$1199.71</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <input checked="" type="checkbox"/>	Dr.Link _____
Date Completed: <u>4/21/06</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>30</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>10</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>310</u>	Other _____	Other (specify) _____

09/857,600

Atty. Dkt. No. 016782-0230

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-19. Cancelled

20. (Previously Presented) <sup>7</sup> A method of manufacturing a coated steel wire having a bright looking surface, said method comprising the following steps:

- (a) providing a steel core;
- (b) coating said steel core with an intermediate coating layer;
- (c) drawing said coated steel core so that said intermediate coating obtains a bright looking surface;
- (d) obtaining a transparent thermoplastic polyester;
- (e) further coating said steel core with a bright intermediate coating layer with said polyester, wherein said polyester is immediately disposed on said intermediate coating layer.

21. (Currently Amended) A method of manufacturing a coated steel wire having a bright looking surface, said method comprising the following steps:

- (a) providing a steel core;
- (b) coating said steel core with an intermediate coating layer;
- (c) drawing said coated steel core so that said intermediate coating obtains a bright looking surface;
- (d) obtaining a transparent thermoplastic polyester;
- (e) further coating said steel core with a bright intermediate coating layer with said polyester, wherein said polyester is immediately disposed on said intermediate coating layer; wherein **said the step of** coating with said intermediate coating layer is done by a hot dip operation.

22. (Previously Presented) A method according to claim 20,  
said method further comprising the step of adding coloring agent to said polyester.

23. (Previously Presented) A method according to claim 20,  
wherein said drawing step (c) is a wet drawing step.

24. (Previously Presented) A method according to claim 20,  
wherein said further coating with a polyester is done by an extrusion process.

25.-30. (Cancelled)

31. (Previously Presented) A steel wire having a coating having a bright looking  
surface, comprising:

a drawn wire, said drawn wire including a steel core covered with an intermediate  
coating layer, said intermediate coating layer having a bright looking surface; and

a polyester coating immediately upon said intermediate coating, said polyester being  
transparent;

wherein said polyester is a thermoplastic polyester selected from the group consisting  
of polyethylene terephthalate, polybutylene terephthalate and polyethylene naphthenate; and

wherein said intermediate coating is a coating comprising at least one of a copper-tin  
sulfate coating and a copper-sulfate coating.

32. (Previously Presented) A method of manufacturing a coated steel wire having a  
bright looking surface, said method comprising:

- (a) providing a steel core;
- (b) coating said steel core with an intermediate coating layer;
- (c) drawing said coated steel core to obtain a bright looking surface; and
- (d) immediately depositing on said intermediate coating layer a transparent  
polyester to coat said intermediate coating layer of said steel core.

33. (Currently Amended) A method of manufacturing a coated steel wire having a bright looking surface, said method comprising:

- (a) providing a steel core;
- (b) coating said steel core with an intermediate coating layer;
- (c) drawing said coated steel core to obtain a bright looking surface; and
- (d) immediately depositing on said intermediate coating layer a transparent

polyester to coat said intermediate coating layer of said steel core;

wherein ~~said~~ the step of coating said steel core with said intermediate coating layer is performed by a hot dip operation.

34. (Previously Presented) A method according to claim 32, wherein said method further comprises adding coloring agent to said polyester.

35. (Previously Presented) A method according to claim 32, wherein said bright looking surface is obtained by wet drawing.

36. (Previously Presented) A method according to claim 32, wherein depositing the polyester is performed by an extrusion process.

37. (Previously Presented) A method according to claim 20, further comprising, after completing at least one of steps (c) and (e), quantifying the degree of brightness based on at least one of the peripheral roughness of the steel wire and the L-value of the steel wire.

38. (Previously Presented) A method according to claim 32, further comprising, after completing at least one of the actions (c) and (d), quantifying the degree of brightness based on at least one of the peripheral roughness of the steel wire and the L-value of the steel wire.

39. (Cancelled)

40. (Cancelled)

=> d his ful

(FILE 'HOME' ENTERED AT 08:37:16 ON 21 APR 2006)

FILE 'HCAPLUS' ENTERED AT 08:37:34 ON 21 APR 2006

E VAN LOO G/AU  
E VAN LOO G?/AU  
L1 33 SEA ABB=ON PLU=ON VAN LOO G?/AU  
E VANDEWALLE G?/AU  
L2 10 SEA ABB=ON PLU=ON VANDEWALLE G?/AU  
E LEPAE A/AU  
E LEPLAE A/AU  
L3 3 SEA ABB=ON PLU=ON LEPLAE A?/AU  
E ADRIAENSEN L/AU  
L4 24 SEA ABB=ON PLU=ON ADRIAENSEN L?/AU  
L5 1 SEA ABB=ON PLU=ON L1 AND L2 AND L3 AND L4  
D ALL  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:42:37 ON 21 APR 2006

L6 8 SEA ABB=ON PLU=ON (12597-69-2/BI OR 25038-59-9/BI OR  
26062-94-2/BI OR 7440-02-0/BI OR 7440-31-5/BI OR  
7440-50-8/BI OR 7440-66-6/BI OR 9002-86-2/BI)  
D SCAN  
E 12597-69-2/RN  
L7 1 SEA ABB=ON PLU=ON 12597-69-2/RN  
D SCAN  
E POLYESTER/PCT  
L8 192496 SEA ABB=ON PLU=ON POLYESTER/PCT  
E 25038-94-2/RN  
D SCAN  
D CN  
E POLYETHYLENE TEREPHTHALATE/CN  
E POLYETHYLENE TEREPHTHALATE/CN  
D RN  
L9 1 SEA ABB=ON PLU=ON 25038-59-9/RN  
D SCAN  
D CN  
E 26062-94-2/RN  
L10 1 SEA ABB=ON PLU=ON 26062-94-2/RN  
D SCAN  
D CN  
E POLYETHYLENE NAPHTHENE/CN  
E POLYETHYLENENAPHTHENE/CN  
E POLYETHYLENE NAPHTHENE/CN  
E POLYETHYLENENAPHTHENE/CN  
E POLYETHYLENE, NAPHTHENE/CN  
E POLYETHYLENE-NAPHTHENE/CN  
E NAPHTHENE/CN  
E NAPHTHENE/CNS  
L11 173 SEA ABB=ON PLU=ON NAPHTHENE/CNS  
E POLYETHYLENE/CNS  
L12 8301 SEA ABB=ON PLU=ON POLYETHYLENE/CNS  
L13 0 SEA ABB=ON PLU=ON L12 AND L11  
E NAPHTHENE/CN  
L14 1 SEA ABB=ON PLU=ON NAPHTHENE/CN  
D SCAN

FILE 'HCAPLUS' ENTERED AT 09:09:14 ON 21 APR 2006

L15 9 SEA ABB=ON PLU=ON POLYETHYLENE (A) NAPHTHENE  
D SCAN

FILE 'REGISTRY' ENTERED AT 09:19:26 ON 21 APR 2006

E 24968-11-4/RN  
L16 1 SEA ABB=ON PLU=ON 24968-11-4/RN  
D SCAN

D CN  
 E 25038-59-9/RN  
 D SCAN  
 D CN  
 L17 1 SEA ABB=ON PLU=ON 25230-87-9/RN  
 D SCAN  
 D CRN STR  
 L18 1671 SEA ABB=ON PLU=ON 1141-38-4/CRN  
 L19 34565 SEA ABB=ON PLU=ON 107-21-1/CRN  
 L20 596 SEA ABB=ON PLU=ON L18 AND L19  
 E 7440-50-8/RN  
 L21 1 SEA ABB=ON PLU=ON 7440-50-8/RN  
 D SCAN  
 D SCAN  
 E 7440-31-5/RN  
 L22 1 SEA ABB=ON PLU=ON 7440-31-5/RN  
 D SCAN  
 E COPPER TIN SULFATE/CN  
 L23 2 SEA ABB=ON PLU=ON ("COPPER TIN SULFATE (CU0.1SN0.9(HS  
 O4)2)"/CN OR "COPPER TIN SULFATE (CU0.1SN0.9(SO4)2)"/CN)  
 D SCAN  
 E COPPER SULFATE/CN  
 L24 17 SEA ABB=ON PLU=ON ("COPPER SULFATE"/CN OR "COPPER  
 SULFATE (1:1)"/CN OR "COPPER SULFATE (CU(HSO4)2)"/CN  
 OR "COPPER SULFATE (CU2(OH)2(SO4)2)"/CN OR "COPPER  
 SULFATE (CU2O(SO4)2)"/CN OR "COPPER SULFATE (CU2SO4)"/CN  
 OR "COPPER SULFATE (CU3(OH)4(SO4)2)"/CN OR "COPPER  
 SULFATE (CU35SO4) PENTAHYDRATE"/CN OR "COPPER SULFATE  
 (CU3O2(SO4)2)"/CN OR "COPPER SULFATE (CU4(OH)6(SO4)2)"/CN  
 OR "COPPER SULFATE (CU4O3(SO4)2)"/CN OR "COPPER  
 SULFATE (CUSO4)"/CN OR "COPPER SULFATE (CUSO4)  
 HEPTAHYDRATE"/CN OR "COPPER SULFATE (CUSO4) MONOHYDRATE  
 "/CN OR "COPPER SULFATE (CUSO4) PENTA(HYDRATE-D2)"/CN  
 OR "COPPER SULFATE (CUSO4) PENTAHYDRATE"/CN OR "COPPER  
 SULFATE (CUSO4) TRIHYDRATE"/CN OR "COPPER SULFATE  
 DIHYDRATE"/CN OR "COPPER SULFATE HEPTAHYDRATE"/CN OR  
 "COPPER SULFATE PENTAHYDRATE"/CN OR "COPPER SULFATE  
 TETRAHYDRATE"/CN OR "COPPER SULFATE TRIHYDRATE"/CN)

FILE 'HCAPLUS' ENTERED AT 10:48:47 ON 21 APR 2006

E WIRE/CT  
 E E3+ALL  
 L25 211773 SEA ABB=ON PLU=ON L7  
 L26 15372 SEA ABB=ON PLU=ON (L25 OR STEEL#) (2A) WIRE#  
 L27 1394 SEA ABB=ON PLU=ON L26 (L) CORE#  
 L28 1713 SEA ABB=ON PLU=ON (BRIGHT OR SHINY) (2A) (SURFACE OR  
 EXTERIOR)  
 L29 20 SEA ABB=ON PLU=ON L28 AND L26  
 D SCAN TI  
 L30 1 SEA ABB=ON PLU=ON L29 AND L1  
 D SCAN  
 L31 0 SEA ABB=ON PLU=ON L29 AND L27  
 L32 318540 SEA ABB=ON PLU=ON L8  
 E THERMOPLASTIC/CT  
 E E12+ALL  
 L33 8298 SEA ABB=ON PLU=ON (L32 OR POLYESTER) (2A) (THERMOPLASTI  
 C OR THERMO(W) PLASTIC)  
 L34 110 SEA ABB=ON PLU=ON L33 (3A) (CLEAR OR TRANSPARENT)  
 L35 462 SEA ABB=ON PLU=ON L33 AND (CLEAR OR TRANSPARENT)  
 L36 249 SEA ABB=ON PLU=ON L35 AND (COAT? OR FILM?)  
 L37 1 SEA ABB=ON PLU=ON L36 AND L29  
 D SCAN  
 L38 3856 SEA ABB=ON PLU=ON L(A) VALUE  
 L39 0 SEA ABB=ON PLU=ON L26 AND L38  
 L40 17 SEA ABB=ON PLU=ON L38 AND WIR?



D SCAN  
 L41 0 SEA ABB=ON PLU=ON L40 AND L26  
 L42 77396 SEA ABB=ON PLU=ON L9  
 E TEREPHTHALTE/CT  
 L43 81992 SEA ABB=ON PLU=ON POLYETHYLENE? (A) TEREPHTHALATE? OR  
 L42  
 L44 13959 SEA ABB=ON PLU=ON L10  
 L45 15009 SEA ABB=ON PLU=ON POLYBUTYLENE? (A) TEREPHTHALATE? OR  
 L44  
 L46 4004 SEA ABB=ON PLU=ON L16

FILE 'REGISTRY' ENTERED AT 11:27:44 ON 21 APR 2006

D SCAN L16  
 D SCAN L17

FILE 'HCAPLUS' ENTERED AT 11:28:43 ON 21 APR 2006

L47 3031 SEA ABB=ON PLU=ON L17  
 L48 3695 SEA ABB=ON PLU=ON L20  
 L49 4736 SEA ABB=ON PLU=ON POLYETHYLENE? (A) NAPHTHENATE? OR  
 L46 OR L47 OR L48  
 L50 45 SEA ABB=ON PLU=ON L26 AND (L43 OR L45 OR L49)  
 D SCAN TI  
 L51 11606 SEA ABB=ON PLU=ON (COAT? OR FILM? OR COVER?) (3A) (L43  
 OR L45 OR L49)  
 L52 2 SEA ABB=ON PLU=ON L27 AND L51  
 D SCAN  
 L53 10 SEA ABB=ON PLU=ON L26 AND L51  
 D SCAN  
 L54 1 SEA ABB=ON PLU=ON L23  
 D SCAN  
 L55 507284 SEA ABB=ON PLU=ON L21  
 L56 QUE ABB=ON PLU=ON L55 OR COPPER OR CU  
 L57 94092 SEA ABB=ON PLU=ON L22  
 L58 QUE ABB=ON PLU=ON L57 OR TIN OR SN  
 L59 13 SEA ABB=ON PLU=ON L54 OR ((L56(A)L58) (A) (SULPHATE OR  
 SULFATE OR SO4))  
 L60 24064 SEA ABB=ON PLU=ON L24  
 L61 29296 SEA ABB=ON PLU=ON L60 OR (COPPER OR CU) (A) (SULFATE  
 OR SULPHATE OF SO4)  
 L62 122 SEA ABB=ON PLU=ON L60 (3A) (COAT? OR FILM? OR COVER?)  
 L63 345 SEA ABB=ON PLU=ON L61 (3A) (COAT? OR FILM? OR COVER?)

FILE 'REGISTRY' ENTERED AT 13:00:07 ON 21 APR 2006

E 25038-59-9/RN  
 D SCAN

FILE 'HCAPLUS' ENTERED AT 13:01:14 ON 21 APR 2006

L64 45 SEA ABB=ON PLU=ON L26 AND (L43 OR L45 OR L49)  
 L65 0 SEA ABB=ON PLU=ON L64 AND (L59 OR L61)  
 L66 39 SEA ABB=ON PLU=ON L26 AND (L59 OR L61)  
 D SCAN TI  
 D L66 39  
 L67 0 SEA ABB=ON PLU=ON L64 AND L66  
 L68 221 SEA ABB=ON PLU=ON L46 AND (L56 OR L58)  
 L69 182 SEA ABB=ON PLU=ON L68 AND (COAT? OR FILM? OR COVER?)  
 L70 86 SEA ABB=ON PLU=ON POLYETHYLENENAPHTHALATE?  
 LL71 4780 SEA ABB=ON PLU=ON L49 OR L70 OR POLYETHYLENE (A) NAPHTH  
 ALTE  
 L72 45 SEA ABB=ON PLU=ON L26 AND (L43 OR L45 OR L71)  
 D QUE  
 L73 10 SEA ABB=ON PLU=ON L72 AND (L56 OR L58)  
 D QUE L56  
 D QUE L58  
 D QUE L59  
 D QUE L61  
 L74 0 SEA ABB=ON PLU=ON L72 AND (L59 OR L61)

L75 8 SEA ABB=ON PLU=ON L73 AND (COAT? OR FILM? OR COVER?)  
 D QUE L8  
 D QUE L36  
 L76 2 SEA ABB=ON PLU=ON L26 AND L36  
 D SCAN  
 D QUE  
 L77 11 SEA ABB=ON PLU=ON L26 AND L33  
 D QUE  
 L78 479935 SEA ABB=ON PLU=ON L32 OR POLYESTER  
 L79 264 SEA ABB=ON PLU=ON L26 AND L78  
 L80 147 SEA ABB=ON PLU=ON L79 AND (COAT? OR FILM? OR COVER?)  
 L81 5 SEA ABB=ON PLU=ON L80 AND (CLEAR OR TRANSPARENT? OR  
 SEETHROUGH OR SEE(A)THROUGH OR COLOR OR COLOUR)  
 D SCAN  
 L82 1 SEA ABB=ON PLU=ON L81 AND L1  
 D QUE L29  
 D QUE L50  
 D QUE L59  
 D QUE L52  
 L83 48 SEA ABB=ON PLU=ON L29 OR L52 OR L53 OR L73 OR (L75  
 OR L76 OR L77) OR L81  
 L84 1 SEA ABB=ON PLU=ON L83 AND L1  
 D ALL  
 L85 161391 SEA ABB=ON PLU=ON HOT(A) (DIP# OR DIPPED OR DIPPING)  
 OR WET(A)DRAW? OR EXTRU?  
 L86 794 SEA ABB=ON PLU=ON L26 AND L85  
 L87 12 SEA ABB=ON PLU=ON L86 AND L83  
 D SCAN  
 L88 48 SEA ABB=ON PLU=ON L87 OR L83

=&gt; =&gt; d que

L7 1 SEA FILE=REGISTRY ABB=ON PLU=ON 12597-69-2/RN  
 L8 192496 SEA FILE=REGISTRY ABB=ON PLU=ON POLYESTER/PCT  
 L9 1 SEA FILE=REGISTRY ABB=ON PLU=ON 25038-59-9/RN  
 L10 1 SEA FILE=REGISTRY ABB=ON PLU=ON 26062-94-2/RN  
 L16 1 SEA FILE=REGISTRY ABB=ON PLU=ON 24968-11-4/RN  
 L17 1 SEA FILE=REGISTRY ABB=ON PLU=ON 25230-87-9/RN  
 L18 1671 SEA FILE=REGISTRY ABB=ON PLU=ON 1141-38-4/CRN  
 L19 34565 SEA FILE=REGISTRY ABB=ON PLU=ON 107-21-1/CRN  
 L20 596 SEA FILE=REGISTRY ABB=ON PLU=ON L18 AND L19  
 L21 1 SEA FILE=REGISTRY ABB=ON PLU=ON 7440-50-8/RN  
 L22 1 SEA FILE=REGISTRY ABB=ON PLU=ON 7440-31-5/RN  
 L25 211773 SEA FILE=HCAPLUS ABB=ON PLU=ON L7  
 L26 15372 SEA FILE=HCAPLUS ABB=ON PLU=ON (L25 OR STEEL#) (2A)WIR  
 E#  
 L27 1394 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 (L) CORE#  
 L28 1713 SEA FILE=HCAPLUS ABB=ON PLU=ON (BRIGHT OR SHINY) (2A) (  
 SURFACE OR EXTERIOR)  
 L29 20 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND L26  
 L32 318540 SEA FILE=HCAPLUS ABB=ON PLU=ON L8  
 L33 8298 SEA FILE=HCAPLUS ABB=ON PLU=ON (L32 OR POLYESTER) (2A)  
 (THERMOPLASTIC OR THERMO(W) PLASTIC)  
 L35 462 SEA FILE=HCAPLUS ABB=ON PLU=ON L33 AND (CLEAR OR  
 TRANSPARENT)  
 L36 249 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND (COAT? OR  
 FILM?)  
 L42 77396 SEA FILE=HCAPLUS ABB=ON PLU=ON L9  
 L43 81992 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYETHYLENE? (A) TEREPH  
 THALATE? OR L42  
 L44 13959 SEA FILE=HCAPLUS ABB=ON PLU=ON L10

L45 15009 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYBUTYLENE? (A) TEREPH  
THALATE? OR L44

L46 4004 SEA FILE=HCAPLUS ABB=ON PLU=ON L16

L47 3031 SEA FILE=HCAPLUS ABB=ON PLU=ON L17

L48 3695 SEA FILE=HCAPLUS ABB=ON PLU=ON L20

L49 4736 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYETHYLENE? (A) NAPHTH  
ENATE? OR L46 OR L47 OR L48

L51 11606 SEA FILE=HCAPLUS ABB=ON PLU=ON (COAT? OR FILM? OR  
COVER?) (3A) (L43 OR L45 OR L49)

L52 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND L51

L53 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L51

L55 507284 SEA FILE=HCAPLUS ABB=ON PLU=ON L21

L56 QUE ABB=ON PLU=ON L55 OR COPPER OR CU

L57 94092 SEA FILE=HCAPLUS ABB=ON PLU=ON L22

L58 QUE ABB=ON PLU=ON L57 OR TIN OR SN

L70 86 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYETHYLENENAPHTHALAT  
E?

L71 4780 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 OR L70 OR  
POLYETHYLENE(A) NAPHTHALTE

L72 45 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND (L43 OR L45  
OR L71)

L73 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L72 AND (L56 OR L58)

L75 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L73 AND (COAT? OR  
FILM? OR COVER?)

L76 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L36

L77 11 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L33

L78 479935 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 OR POLYESTER

L79 264 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L78

L80 147 SEA FILE=HCAPLUS ABB=ON PLU=ON L79 AND (COAT? OR  
FILM? OR COVER?)

L81 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L80 AND (CLEAR OR  
TRANSPARENT? OR SEETHROUGH OR SEE(A) THROUGH OR COLOR  
OR COLOUR)

L83 48 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 OR L52 OR L53 OR  
L73 OR (L75 OR L76 OR L77) OR L81

L85 161391 SEA FILE=HCAPLUS ABB=ON PLU=ON HOT(A) (DIP# OR DIPPED  
OR DIPPING) OR WET(A) DRAW? OR EXTRU?

L86 794 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L85

L87 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L86 AND L83

L88 48 SEA FILE=HCAPLUS ABB=ON PLU=ON L87 OR L83

=> d 188 1-48 ibib abs hitstr hitind

L88 ANSWER 1 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1048904 HCAPLUS

DOCUMENT NUMBER: 143:327660

TITLE: Poly(phenylene sulfide) fibers with increased  
tensile strength and bending abrasion  
resistance, comprising fibers consisting of  
poly(phenylene sulfide) compositions  
containing **thermoplastic**  
**polyesters** and industrial fabrics  
therefrom

INVENTOR(S): Uchiyama, Yusuke; Kinoshita, Akira  
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan; Toray  
Monofilament Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005264349

A2

20050929

JP 2004-74780

2004

0316

PRIORITY APPLN. INFO.:

JP 2004-74780

2004

0316

- AB The fibers (A1) consist of a composition comprising 90-60% poly(phenylene sulfide) (I) and 10-40% **thermoplastic polyesters**, and show number of reciprocating abrasion cycles required for breakage of the yarns 9000-20,000, as detd by the bending abrasion resistance testing method of JIS L-1095-7.10.2B [ $\phi$  3.0-mm abrasion element [hard **steel wire** (SWP-SF)], distance between 2 free rolls 70 mm, load 0.196 cN/dtex, number of reciprocating cycles 105 turns/min, reciprocating stroke 25 mm, 10 samples], and show number of reciprocating bending fatigue cycles required for yarn breakage 150-500, as determined by the bending fatigue resistance testing method of JIS P-8115 [MIT bending fatigue testing apparatus, load 0.221 cN/dtex, number of oscillation 175 turns/min, oscillation angle (each of right and left) 135°, bending radius of curvature (each of right and left) 0.38  $\pm$  0.03 mm, 10 samples], or the fibers comprise above A1 fibers having I showing melt flow rate (MFR) 100-250 g/10 min, as measured by the method of ASTM D 1238-86 (at 316°, orifice diameter 2.095 mm, orifice length 8.00 mm, load 5 kg), and essentially have a linear mol. structure. The industrial fabrics partially or wholly comprise above A1 fibers. A composition containing 80% I (E 2080) with MFR 100 g/10 min and 20% poly(ethylene terephthalate) was fed to an **extruder** with 2 kneading zones at **extrusion** temperature 320°, **extruded** through a die, and quenched in ice water to give guts with a fixed structure. The guts were cut to form pellets, dried, melted at 320°, passed through a spinning pack, melt spun through a spinneret, cooled in H<sub>2</sub>O at 80°, drawn to draw ratio 3.8 under saturated steam at 1.96 kPa, subsequently drawn to draw ratio 1.2 in hot air at 150°, and relaxed at 140° to give monofilaments with tensile strength 2.9 cN/dtex, elongation 46.9%, knot strength 2.5 cN/dtex, pulling strength 3.4 cN/dtex, and showing number of bending abrasion cycles required for yarn breakage 14037, and exhibiting number of bending fatigue cycles required for yarn breakage 315, and showing tensile strength retention 100%, on heat-treating the monofilaments for 40 days under steam at 138° and 0.294 MPa.
- IC ICM D01F006-76  
ICS D01F006-94; D03D015-00
- CC 40-2 (Textiles and Fibers)
- IT Polythiophenylenes  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber; poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)
- IT Abrasion-resistant materials  
Heat-resistant materials  
Textiles  
(poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)
- IT Polyesters, uses  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(poly(phenylene sulfide) fibers with increased tensile strength

- and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)
- IT Synthetic polymeric fibers, uses  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(polythiophenylenes; poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)
- IT 26125-40-6, 1,4-Dichlorobenzene-sodium sulfide copolymer  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(assumed monomers, fiber; poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters**)
- IT 25212-74-2, E 2080  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(fiber; poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)
- IT 25038-59-9, uses  
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
(poly(phenylene sulfide) fibers with increased tensile strength and bending abrasion resistance, comprising fibers consisting of poly(phenylene sulfide) compns. containing **thermoplastic polyesters** and industrial fabrics therefrom)

L88 ANSWER 2 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:692093 HCAPLUS

DOCUMENT NUMBER: 143:155028

TITLE: Coated wire comprising a metal core and a thermoplastic coating having a matte appearance and process for making coated wire  
INVENTOR(S): Adriaensen, Ludo; Bostoën, Joos; Leplae, Alain; Vandewalle, Gerard

PATENT ASSIGNEE(S): N. V. Bekaert S. A., Belg.

SOURCE: Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1559483	A1	20050803	EP 2004-100356	

2004

0202

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
EE, HU, SK

PRIORITY APPLN. INFO.: EP 2004-100356

2004

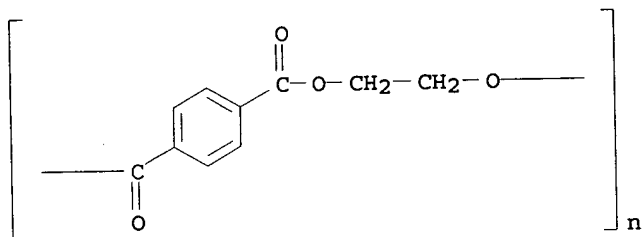
0202

AB The coated wire comprises a metal core and a thermoplastic coating. The thermoplastic coating has a 60° gloss (ISO 2813) <45. The thermoplastic coating has preferably a surface roughness (Ra value) >0.15 µm. Steel wire has a C content 0.50-0.70% and is characterized by a tensile strength 1600-1800 N/mm<sup>2</sup>. The steel wire is coated with a Zn-Al coating and a PET coating on top of this Zn-Al coating.

IT 25038-59-9, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coated wire comprising a metal core and thermoplastic coating having a matte appearance)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IC ICM B05D003-12  
ICS B05D007-20; B60S001-38

CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 55

ST thermoplastic matte coating wire; PET coated steel wire reinforcement wiper blade

IT 12597-69-2, Steel, uses 12635-57-3 25038-59-9  
, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coated wire comprising a metal core and thermoplastic coating having a matte appearance)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L88 ANSWER 3 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:281409 HCAPLUS

DOCUMENT NUMBER: 142:358020

TITLE: Wire interconnects for connected flexible photovoltaic cells

INVENTOR(S): Eckert, Robert; Gaudiana, Russell; Li, Lian; Montello, Alan; Montello, Edmund

PATENT ASSIGNEE(S): Konarka Technologies, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 58 pp., Cont.-in-part of U.S. Ser. No. 57,394.  
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 22

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005067006	A1	20050331	US 2003-351298	2003

				0124
US 6924427	B2	20050802		
US 2003140959	A1	20030731	US 2002-57394	2002 0125
US 6706963	B2	20040316		
CN 1541425	A	20041027	CN 2002-815625	2002 0531
US 2005257827	A1	20051124	US 2005-145333	2005 0603
US 2005268962	A1	20051208	US 2005-145128	2005 0603
US 2006076048	A1	20060413	US 2005-144272	2005 0603
US 2006005876	A1	20060112	US 2005-221439	2005 0908
PRIORITY APPLN. INFO.:			US 2002-351691P	P 2002 0125
			US 2002-57394	A2 2002 0125
			US 2002-368832P	P 2002 0329
			US 2002-400289P	P 2002 0731
			US 2002-427642P	P 2002 1119
			AT 2001-1231	A 2001 0807
			US 2002-353138P	P 2002 0201
			WO 2002-AT166	W 2002 0531
			US 2002-390071P	P 2002 0620
			US 2002-396173P	P 2002 0716
			WO 2002-SE2049	W 2002 1108
			WO 2002-DE4563	W

	2002 1212
US 2003-350800	A2 2003 0124
US 2003-350812	A2 2003 0124
US 2003-350912	A2 2003 0124
US 2003-350913	A2 2003 0124
US 2003-350919	A2 2003 0124
US 2003-351249	A2 2003 0124
US 2003-351250	A2 2003 0124
US 2003-351251	A2 2003 0124
US 2003-351260	A2 2003 0124
US 2003-351264	A2 2003 0124
US 2003-351265	A2 2003 0124
US 2003-351298	A2 2003 0124
US 2003-351607	A2 2003 0124
WO 2003-DE385	W 2003 0210
US 2003-258709	A2 2003 0227
US 2003-395823	A2 2003 0324



WO 2003-AT131	W	2003 .0506
US 2003-258708	A2	2003 0522
WO 2003-DE1867	W	2003 0605
WO 2003-DE2463	W	2003 0722
US 2003-495302P	P	2003 0815
US 2003-723554	A2	2003 1126
US 2003-526373P	P	2003 1201
US 2004-546818P	P	2004 0219
US 2004-498484	A2	2004 0614
US 2004-486116	A2	2004 0713
US 2004-589423P	P	2004 0720
US 2004-590312P	P	2004 0722
US 2004-590313P	P	2004 0722
US 2004-897268	A2	2004 0722
US 2004-504091	A2	2004 0811
US 2004-494560	A2	2004 1117
US 2004-276	A2	

		2004 1130
US 2004-637844P	P	2004 1220
US 2004-638070P	P	2004 1221
US 2005-33217	A2	2005 0110
US 2005-663985P	P	2005 0321
US 2005-664114P	P	2005 0321
US 2005-664298P	P	2005 0322
US 2005-664336P	P	2005 0323
US 2005-258713	A2	2005 0516
US 2005-515159	A2	2005 0621
US 2005-509935	A2	2005 0819
US 2005-522862	A2	2005 0906

AB A method to connect a number of photovoltaic cells in a photovoltaic module is presented. The method entails: providing a first base material with a conductive layer, disposing a photosensitized interconnected nanoparticle material and a charge carrier material on the conductive layer, and providing a connecting wire. A second base material with a conductive layer is then joined to the first base material such that the first and second conductive layers are in elec. contact with the wire. One or more wires with an adhesive strip then serve as elec. conductive connectors between the photovoltaic cells.

IT 7440-31-5, Tin, uses 7440-50-8,  
Copper, uses 24968-11-4, Polyethylene  
naphthalate 25038-59-9, PET (polyester), uses  
25230-87-9

RL: DEV (Device component use); USES (Uses)  
(wire interconnects for connected flexible  
photovoltaic cells)

RN 7440-31-5 HCAPLUS

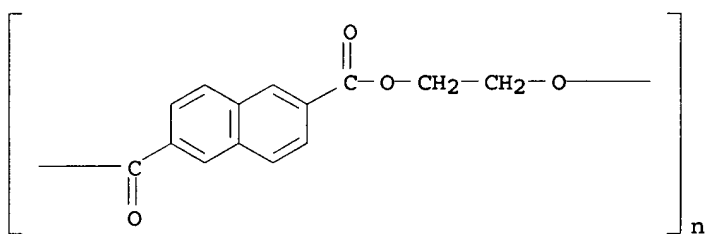
CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

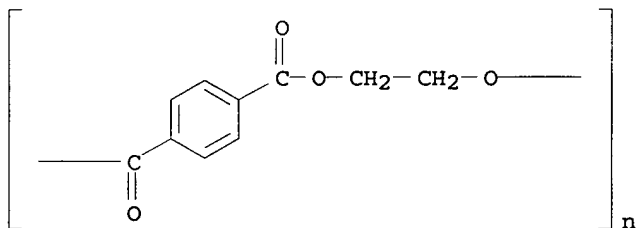
RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 24968-11-4 HCAPLUS  
CN Poly(oxy-1,2-ethanediylloxycarbonyl-2,6-naphthalenediylcarbonyl)  
(9CI) (CA INDEX NAME)



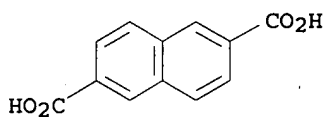
RN 25038-59-9 HCAPLUS  
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



RN 25230-87-9 HCAPLUS  
CN 2,6-Naphthalenedicarboxylic acid, polymer with 1,2-ethanediol  
(9CI) (CA INDEX NAME)

CM 1

CRN 1141-38-4  
CMF C12 H8 O4



CM 2

CRN 107-21-1  
CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

IC ICM H01L031-00  
 INCL 136244000; 438080000  
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
 Section cross-reference(s): 76  
 IT 18282-10-5, Tin oxide (SnO<sub>2</sub>)  
 RL: DEV (Device component use); USES (Uses)  
 (fluorinated, platinum-coated; wire interconnects for  
 connected flexible photovoltaic cells)  
 IT 7782-41-4, Fluorine, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (tin oxide doped with; wire interconnects for  
 connected flexible photovoltaic cells)  
 IT 64-17-5, Ethanol, uses 69-89-6D, derivs. 75-58-1 105-58-8,  
 Ethyl carbonate 108-32-7, Propylene carbonate 109-97-7D,  
 1H-Pyrrole, derivs. 110-67-8, 3-Methoxy propionitrile  
 603-34-9, Triphenylamine 629-03-8, 1,6-Dibromo hexane  
 631-40-3, Tetrapropylammonium iodide 1312-81-8, Lanthanum oxide  
 1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses  
 1314-35-8, Tungsten oxide, uses 1332-29-2, Tin oxide  
 6156-37-2, 4-Diphenyl aminobenzoic acid 7429-90-5, Aluminum,  
 uses 7439-89-6D, Iron, transition metal complexes 7439-93-2D,  
 Lithium, complexes with poly(4-vinylpyridine) or with PEO  
 7440-04-2D, Osmium, transition metal complexes 7440-18-8D,  
 Ruthenium, transition metal complexes 7440-31-5,  
 Tin, uses 7440-32-6, Titanium, uses 7440-50-8,  
 Copper, uses 7440-69-9, Bismuth, uses 7447-41-8,  
 Lithium chloride (LiCl), uses 7550-35-8, Lithium bromide (LiBr)  
 7553-56-2, Iodine, uses 7647-01-0, Hydrogen chloride, uses  
 7681-11-0, Potassium iodide, uses 7732-18-5, Water, uses  
 7789-17-5, Cesium iodide 9006-26-2, Ethylene maleic anhydride  
 copolymer 10377-51-2, Lithium iodide (LiI) 12597-68-1,  
 Stainless steel, uses 12627-00-8, Niobium oxide  
 12738-76-0, Terbium oxide 13463-67-7, Titanium oxide, uses  
 14900-04-0, Triiodide 24968-11-4, Polyethylene  
 naphthalate 25038-59-9, PET (polyester), uses  
 25069-75-4 25230-87-9 25232-41-1D,  
 Poly(4-vinylpyridine), lithium complexes 25322-68-3D, PEO,  
 lithium complexes 26856-69-9, Methoxy propionitrile  
 28516-43-0, Surlyn 1702 30304-58-6, Methyl benzimidazole  
 41246-22-4, 3-Methoxybutyronitrile 50926-11-9, Indium  
 tin oxide 59763-75-6, Tantalum oxide 65039-05-6  
 68007-08-9 118676-08-7, tert-Butyl pyridine 119171-18-5,  
 1-Methyl-3-propyl imidazolium iodide 141460-19-7, N3 Dye  
 335377-64-5, Thermobond 615  
 RL: DEV (Device component use); USES (Uses)  
 (wire interconnects for connected flexible  
 photovoltaic cells)

L88 ANSWER 4 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:1076501 HCAPLUS  
 DOCUMENT NUMBER: 142:39393  
 TITLE: Formation method of unevenness on sheet  
 materials and sheet shaped rubbers and foamed  
 rubber sheets  
 INVENTOR(S): Inoue, Sadao  
 PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

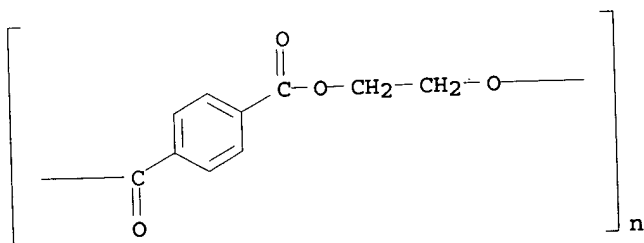
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004351836	A2	20041216	JP 2003-154227	2003 0530

PRIORITY APPLN. INFO.: JP 2003-154227 2003  
0530

AB Title method comprise (i) overlapping an unevenness forming member to one of the surface of sheet materials comprising polymeric materials which are softened and expanded by heat such as thermoplastic elastomers and rubber compns. via a sheet-shaped release material, (ii) integrally heat-pressing thereof, and (iii) separation of the unevenness forming member and the release material from the sheet material by chipping, wherein the unevenness forming material is not deformed by heat-press and selected from the various wire gauges such as rhombic wire nets, crimp wire nets, tortoise wire nets, woven wire fabrics, welded wire fabrics, reinforced grids, punching metals, expand metals, natural fiber nets, synthetic fiber nets, and synthetic plates having regular specific dents or openings and the release material is heat and press-resistant bend deformable and selected from release films and release-treated fabrics. Thus, a butyl rubber was placed on a plain weave fabric comprising polyester fibers, a plain weave fabric comprising nylon 66 as a release material was overlapped on the butyl rubber, a galvanized iron wire crimp wire net was placed on the release material, heat-pressed, and removed the crimp wire net and the release material to give a rubber having dents with depth 2.3-4.6 mm, which was placed on a rubber sheet comprising styrene-butadiene rubber composition and heat-pressed to give a rubber sheet having protrusion shapes on the surfaces.

IT 25038-59-9, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(release film; formation method of unevenness on  
sheet materials and sheet shaped rubbers and foamed rubber  
sheets)

RN 25038-59-9 HCAPLUS  
CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IC ICM B29C059-02  
ICS B29C033-02; B29C033-68; B29C035-02; B29C059-04; C08J009-04;  
B29K007-00; B29K009-00; B29K019-00; B29K105-04; B29K105-24;  
C08L009-00

CC 38-2 (Plastics Fabrication and Uses)  
Section cross-reference(s): 39, 40

IT Galvanized steel  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wires, unevenness forming materials; formation  
method of unevenness on sheet materials and sheet shaped

rubbers and foamed rubber sheets)  
 IT 25038-59-9, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (release film; formation method of unevenness on  
 sheet materials and sheet shaped rubbers and foamed rubber  
 sheets)

L88 ANSWER 5 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:1060562 HCAPLUS  
 DOCUMENT NUMBER: 142:39577  
 TITLE: Plastic article comprising bundle drawn  
 stainless steel fibers  
 INVENTOR(S): De Bondt, Stefaan; Decrop, Jaak  
 PATENT ASSIGNEE(S): N.V. Bekaert S.A., Belg.  
 SOURCE: U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part  
 of U.S. Ser. No. 482,379.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004247848	A1	20041209	US 2004-771276	2004 0204
WO 2003010353	A1	20030206	WO 2002-EP7269	2002 0702
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004265576	A1	20041230	US 2004-482379	2004 0220
PRIORITY APPLN. INFO.:				EP 2001-202775 A 2001 0720 WO 2002-EP7269 W 2002 0702 US 2004-482379 A2 2004 0220

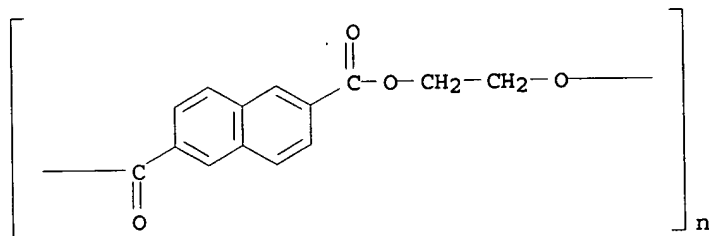
AB The plastic articles comprising stainless steel fibers are  
 obtained by bundled drawing of stainless steel  
 wires embedded in a matrix material. The composition of the  
 stainless steel fibers comprises Fe and the following components  
 expressed in percent by weight: C  $\leq$  0.05%, Mn  $\leq$  5%, Si  
 $\leq$  2%, 8  $\leq$  Ni  $\leq$  12%, 15%  $\leq$  Cr  $\leq$  20%,  
 Mo  $\leq$  3%, Cu  $\leq$  4%, N  $\leq$  0.05%, S  
 $\leq$  0.03%, and P  $\leq$  0.05%.  
 IT 24968-11-4, Polyethylene naphthalate 25038-59-9,

uses 26062-94-2, Polybutylene  
terephthalate

RL: TEM (Technical or engineered material use); USES (Uses)  
(plastic comprising bundle drawn stainless steel fibers)

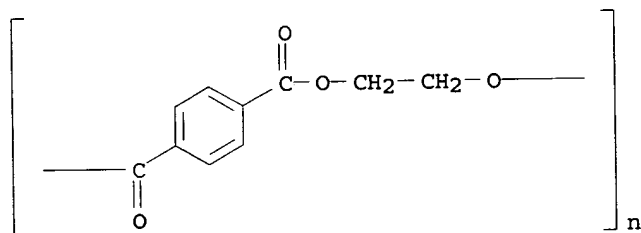
RN 24968-11-4 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-2,6-naphthalenediylcarbonyl)  
(9CI) (CA INDEX NAME)



RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



RN 26062-94-2 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI)  
(CA INDEX NAME)

CM 1

CRN 110-63-4

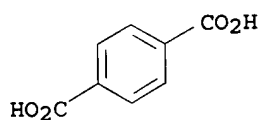
CMF C4 H10 O2

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

CM 2

CRN 100-21-0

CMF C8 H6 O4



IC ICM D04H001-00

INCL 428292100

CC 38-3 (Plastics Fabrication and Uses)

IT Electromagnetic shields  
(wires, stainless steel for; plastic  
comprising bundle drawn stainless steel fibers)

IT 7439-89-6, Iron, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coating, fibers with; plastic comprising bundle  
drawn stainless steel fibers)

IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene  
9002-89-5, Polyvinyl alcohol 9003-07-0, Polypropylene  
9003-53-6, Polystyrene 9003-54-7, Acrylonitrile-styrene  
copolymer 9003-56-9, Acrylonitrile-butadiene-styrene copolymer  
9020-73-9, Polyethylene naphthalate 24937-16-4, Nylon 12  
24968-11-4, Polyethylene naphthalate 24968-12-5,  
Polybutylene terephthalate 25038-59-9,  
uses 25038-74-8 26062-94-2, Polybutylene  
terephthalate 494831-56-0 494831-57-1 494831-58-2  
494831-59-3  
RL: TEM (Technical or engineered material use); USES (Uses)  
(plastic comprising bundle drawn stainless steel fibers)

L88 ANSWER 6 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:820036 HCAPLUS  
DOCUMENT NUMBER: 141:315948  
TITLE: Resin compositions for metal wire coating and  
metal wires coated therewith  
INVENTOR(S): Kamikawa, Yasuo  
PATENT ASSIGNEE(S): Unitika Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004277642	A2	20041007	JP 2003-73690	2003 0318
PRIORITY APPLN. INFO.:				2003 0318

AB Resin compns. contain 10-80% polyarylates and 20-90% polyesters  
prepared mainly from terephthalic acid and ethylene glycol. Thus,  
Zn-plated steel wire was extrusion  
coated with pellets containing 30 parts U Powder and 70 parts PETG  
6763.

IC ICM C09D167-02  
ICS C09D123-00; C09D167-03; C09D171-10

CC 42-10 (Coatings, Inks, and Related Products)

ST metal wire coating polyester; zinc plating steel  
wire polyester coating

IT Ionomers  
Phenoxy resins  
Polyolefins  
Thermoplastic rubber  
RL: MOA (Modifier or additive use); USES (Uses)  
(polyester resin compns. for metal wire coatings)

L88 ANSWER 7 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:756949 HCAPLUS  
DOCUMENT NUMBER: 141:262158  
TITLE: Transparent polymer coated  
metal rope and its applications



INVENTOR(S): Calleeuw, Jan; Dauwe, Danieel  
 PATENT ASSIGNEE(S): N.V. Bekaert S.A., Belg.  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004079085	A1	20040916	WO 2003-EP50145	2003 0506

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

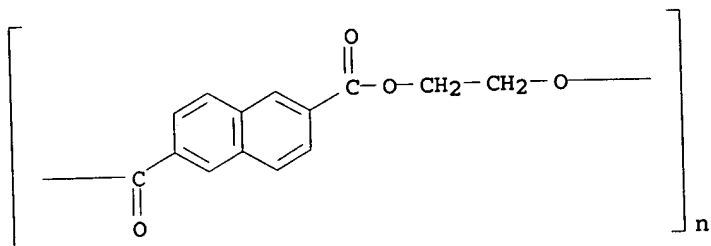
AU 2003303746	A1	20040928	AU 2003-303746	2003 0506
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PRIORITY APPLN. INFO.: EP 2002-100480 A 2002  
0513  
WO 2003-EP50145 W 2003  
0506

AB A metal rope comprises stainless steel wires, and at least partially of the wires exposed to the surface are coated with a transparent polymer selected from thermoplastic polymers, polyimides, polyamides, and polyphthalamides. The metal ropes can form woven or knitted fabrics comprising a weft and a warp, and the ropes can also be used in architectural, building, and decorative applications.

IT 24968-11-4, Polyethylene naphthalate 26062-94-2, Polybutylene terephthalate  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (assumed monomers; transparent polymer coated metal rope for woven fabrics and architectural and decorative ropes)

RN 24968-11-4 HCAPLUS  
 CN Poly(oxy-1,2-ethanedioxydicarbonyl-2,6-naphthalenediylcarbonyl) (9CI) (CA INDEX NAME)



RN 26062-94-2 HCAPLUS  
 CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI)  
 (CA INDEX NAME)

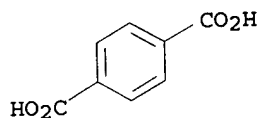
CM 1

CRN 110-63-4  
 CMF C4 H10 O2

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

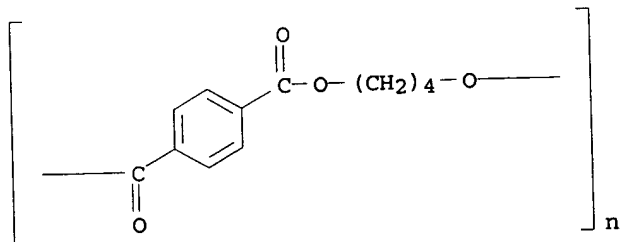
CM 2

CRN 100-21-0  
 CMF C8 H6 O4

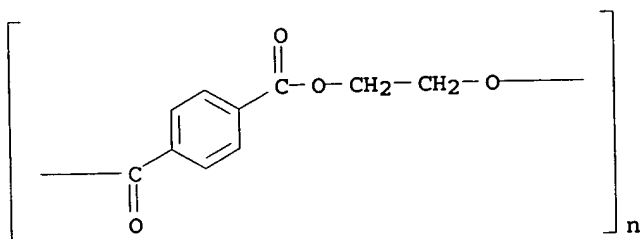


IT 24968-12-5, Polybutylene terephthalate  
 25038-59-9, PET polymer, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (transparent polymer coated metal rope for woven fabrics and architectural and decorative ropes)

RN 24968-12-5 HCAPLUS  
 CN Poly(oxy-1,4-butanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



IC ICM D07B001-16  
ICS D07B001-06

CC 42-7 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38, 40

ST **polyester** polyamide polyimide **coating** metal  
architectural decorative rope fabric

IT **Transparent** materials  
(**coatings**; **transparent** polymer  
**coated** metal rope for woven fabrics and architectural  
and decorative ropes)

IT Textiles  
(knitted; **transparent** polymer **coated** metal  
rope for woven fabrics and architectural and decorative ropes)

IT Ropes  
Wires  
(**transparent** polymer **coated** metal rope for  
woven fabrics and architectural and decorative ropes)

IT Polyamides, uses  
**Polyesters**, uses  
Polyimides, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(**transparent** polymer **coated** metal rope for  
woven fabrics and architectural and decorative ropes)

IT **Coating** materials  
(**transparent**; **transparent** polymer  
**coated** metal rope for woven fabrics and architectural  
and decorative ropes)

IT Yarns  
(warp; **transparent** polymer **coated** metal  
rope for woven fabrics and architectural and decorative ropes)

IT 24968-11-4, Polyethylene naphthalate 26062-94-2,  
Polybutylene terephthalate  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(assumed monomers; **transparent** polymer **coated**  
metal rope for woven fabrics and architectural and decorative  
ropes)

IT 9020-73-9, Polyethylene naphthalate 24968-12-5,  
**Polybutylene terephthalate** 25038-59-9,  
PET polymer, uses  
RL: POF (Polymer in formulation); TEM (Technical or engineered  
material use); USES (Uses)  
(**transparent** polymer **coated** metal rope for  
woven fabrics and architectural and decorative ropes)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L88 ANSWER 8 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:508935 HCAPLUS  
DOCUMENT NUMBER: 141:74736  
TITLE: High-carbon steel alloyed for drawing of  
high-strength fine wire coated with brass  
INVENTOR(S): Zelin, Michael Gregory; Starinshak, Thomas

PATENT ASSIGNEE(S): Walter; Lewis, James Terry  
 SOURCE: The Goodyear Tire & Rubber Company, USA  
 U.S. Pat. Appl. Publ., 14 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004118486	A1	20040624	US 2002-322975	2002 1218
US 6949149	B2	20050927		
EP 1433868	A1	20040630	EP 2003-104628	2003 1210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003005998	A	20040831	BR 2003-5998	2003 1210
PRIORITY APPLN. INFO.:			US 2002-322975	A 2002 1218

AB The low-alloy steel for wire drawing contains  
 C 0.95-1.3, Mn 0.2-1.8, Si 0.2-1.2, Cr 0.2-1.8, Co  $\leq$ 2.2, Nb  
 $\leq$ 0.1, S  $<$ 0.006, P  $<$ 0.010, and B 0.0006-0.0025% by weight The  
 steel wire is drawn to an intermediate diameter and  
 bright surface, followed by chemical patenting to  
 form pearlitic microstructure with fine lamellar spacing, coating  
 with brass, and fine drawing to the final diameter of 0.1-0.4 mm with  
 true strain of 3.6-4.5 for tensile strength of nominally 3800-4500  
 MPa. The brass-coated wire is suitable for manufacture of  
 high-strength tire cords. The typical steel contains C 1.10, Mn  
 0.6, Si 0.4, Cr 0.5, Co 1.9, Nb 0.006, and B 0.0006% by weight  
 IC ICM C21D008-06  
 INCL 148522000; 148532000; 148598000  
 CC 55-3 (Ferrous Metals and Alloys)  
 ST carbon steel drawing wire strength brass  
 coating  
 IT Wires  
 (brass-coated steel; high-carbon steel alloyed for  
 drawing of high-strength fine wire coated with brass)  
 IT 12597-71-6, Brass, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coating, steel wire with; high-carbon  
 steel alloyed for drawing of high-strength fine wire coated  
 with brass)

L88 ANSWER 9 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:853152 HCAPLUS  
 DOCUMENT NUMBER: 139:339087  
 TITLE: Coating on metallic wires for foundation  
 garments such as underwirings of brassieres,  
 coating structures, and coating materials  
 INVENTOR(S): Honma, Isao; Honma, Fuminari  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003306805	A2	20031031	JP 2002-107638	2002 0410

PRIORITY APPLN. INFO.: JP 2002-107638  
2002  
0410

AB The process involves (i) heating of the whole of a wire, (ii) depositing thermoplastic resin(-based) powders on all over the hot metallic wire and adhering of the melted, (iii) heating of the wire ends, (iv) depositing powders of thermoplastic resins, thermosetting resins, or resins involving thermosetting resins on the hot ends and adhering of the melted, (v) heating of the whole of the coated wire, and (vi) quenching of the thermally finished wire. The coating material containing powdered thermoplastic resins as the base component and containing  $\geq 3\%$  powdered thermosetting resins are also claimed. Thus, a coating containing regenerated poly(ethylene terephthalate) (PET) and a binder comprising poly(ethylene terephthalate) 40, poly(butylene terephthalate) 40, and low-mol.-weight olefin wax 20% was dip-coated on a hot C steel wire for an underwiring of a brassiere in a fluidized bed, then the ends of the coated wire were dip-coated with regenerated PET contg. 7% unsatd. polyesters to give laminated coating structures with improved bond strength on edges.

IC ICM A41C003-14  
ICS A41C005-00; B05D007-20; B05D007-24; C09D005-03; C09D167-00; C09D167-06; C09D201-00

CC 42-2 (Coatings, Inks, and Related Products)

ST brassiere underwiring laminar edge coating; **polyethylene terephthalate coating** brassiere underwiring; unsatd polyester coating brassiere underwiring end

L88 ANSWER 10 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:811809 HCAPLUS

DOCUMENT NUMBER: 139:308765

TITLE: Flexible low gas-permeable hose containing gas-barrier wire-netting layer

INVENTOR(S): Kosaka, Nobuhiro

PATENT ASSIGNEE(S): Bridgestone Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

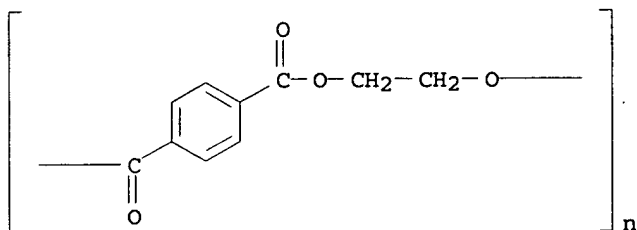
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003294177	A2	20031015	JP 2002-96286	2002 0329

PRIORITY APPLN. INFO.: JP 2002-96286  
2002  
0329

AB Title hose consists in the order of (A) an inner layer, optionally (B) an inner elastic layer, (C) gas-barrier wire-netting layer such as iron, stainless steel, galvanized steel, **copper**, and brass optionally (D) an outer elastic layer, optionally (E) a

reinforcing layer, and (F) an outer layer.  
 IT 25038-59-9, PET polymer, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fibers, reinforcing layer; production of flexible low  
 gas-permeable hose containing gas-barrier wire-netting layer)  
 RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



IT 7440-50-8, Copper, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (gas-barrier wire-netting layer; production of flexible low  
 gas-permeable hose containing gas-barrier wire-netting layer)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IC ICM F16L011-12  
 ICS B32B001-08; B32B015-06; F16L011-08  
 CC 39-15 (Synthetic Elastomers and Natural Rubber)  
 IT Metallic fibers  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (copper, gas-barrier wire-netting layer; production of  
 flexible low gas-permeable hose containing gas-barrier wire-netting  
 layer)  
 IT Galvanized steel  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (gas-barrier wire-netting layer; production of flexible  
 low gas-permeable hose containing gas-barrier wire-netting layer)  
 IT Coating materials  
 (gas-impermeable; production of flexible low gas-permeable hose  
 containing gas-barrier wire-netting layer)  
 IT Metallic fibers  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (stainless steel, gas-barrier wire-netting  
 layer; production of flexible low gas-permeable hose containing  
 gas-barrier wire-netting layer)  
 IT 25038-59-9, PET polymer, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (fibers, reinforcing layer; production of flexible low  
 gas-permeable hose containing gas-barrier wire-netting layer)  
 IT 7439-89-6, Iron, uses 7440-50-8, Copper, uses  
 12597-68-1, Stainless steel, uses 12597-71-6, Brass, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (gas-barrier wire-netting layer; production of flexible low  
 gas-permeable hose containing gas-barrier wire-netting layer)

L88 ANSWER 11 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:610807 HCAPLUS  
 DOCUMENT NUMBER: 139:152332  
 TITLE: Structures and materials for dye sensitized

INVENTOR(S): solar cells  
 Gaudiana, Russell A.; Li, Lian; Eckert,  
 Robert; Montello, Alan; Montello, Edmund;  
 Ryan, James; Beckenbaugh, Bill  
 PATENT ASSIGNEE(S): Konarka Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 134 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 22  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003065472	A2	20030807	WO 2003-US2263	2003 0124
WO 2003065472	A3	20040415		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003140959	A1	20030731	US 2002-57394	2002 0125
US 6706963	B2	20040316		
CN 1541425	A	20041027	CN 2002-815625	2002 0531
CA 2474491	AA	20030807	CA 2003-2474491	2003 0124
EP 1470598	A2	20041027	EP 2003-705906	2003 0124
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005516371	T2	20050602	JP 2003-564952	2003 0124
PRIORITY APPLN. INFO.:			US 2002-351691P	P 2002 0125
			US 2002-57394	A 2002 0125
			US 2002-368832P	P 2002 0329
			US 2002-400289P	P 2002 0731

US 2002-427642P P  
2002  
1119

AT 2001-1231 A  
2001  
0807

WO 2003-US2263 W  
2003  
0124

AB Materials of, structures of, and methods of forming photovoltaic cells and modules are described. In particular, the invention, in one embodiment, provides wires to interconnect conductive layers of a cell or module. The photoactive layer may be sintered on a metal foil at either high or low temps. to form a flexible photovoltaic cell or module. In addition, photovoltaic cells or modules may be formed on rigid substrates to enhance the longevity and durability of the cell or module. Discrete photovoltaic cells or modules may be formed by parting an elec. conductive coating on a polymeric substrate and melting at least a portion of the polymeric substrate, thus encapsulating any debris formed when the conductive layer is parted. In addition, a method of using an ultrasonic slitting device to cut and seal the edges of photovoltaic cells and modules is described.

IT 7440-31-5, Tin, uses  
RL: DEV (Device component use); USES (Uses)  
(structures and materials for dye sensitized solar cells)

RN 7440-31-5 HCAPLUS

CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

IT 7440-50-8, Copper, uses 25038-59-9,  
Polyethylene terephthalate, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(structures and materials for dye sensitized solar cells)

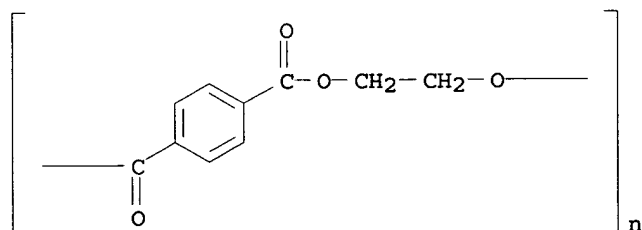
RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanedioxy carbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IC ICM H01L051-20

ICS H01G009-20; H01L025-04

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)



IT Coating process  
(dip; structures and materials for dye sensitized solar cells)

IT 18282-10-5, Tin oxide sno2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(F-doped; structures and materials for dye sensitized solar cells)

IT 629-03-8, 1,6-Dibromohexane 1312-81-8, Lanthanum oxide  
1314-13-2, Zinc oxide, uses 1314-23-4, Zirconium oxide, uses  
1314-35-8, Tungsten oxide, uses 1317-70-0, Anatase 1332-29-2,  
Tin oxide 6156-37-2, Benzoic acid, 4-Diphenylamino  
7440-31-5, Tin, uses 7440-69-9, Bismuth, uses  
7447-41-8, Lithium chloride (LiCl), uses 7550-35-8, Lithium  
bromide (LiBr) 7553-56-2, Iodine, uses 10377-51-2, Lithium  
iodide (LiI) 12627-00-8, Niobium oxide 12738-76-0, Terbium  
oxide 13463-67-7, Titanium oxide, uses 14900-04-0, Triiodide  
15438-31-0, uses 20074-52-6, uses 20461-54-5, Iodide, uses  
22541-53-3, Cobalt(2+), uses 22541-63-5, Cobalt(3+), uses  
25232-41-1, Poly(4-vinylpyridine) 50926-11-9, Ito 59763-75-6,  
Tantalum oxide 65039-05-6, 1-Methyl 3-butyl imidazolium iodide  
118676-08-7, tert-Butylpyridine 119171-18-5, 1-Methyl 3-propyl  
imidazolium iodide 178631-05-5, 1-Methyl 3-hexyl imidazolium  
iodide 573685-54-8  
RL: DEV (Device component use); USES (Uses)  
(structures and materials for dye sensitized solar cells)

IT 7440-32-6, Titanium, uses 7440-50-8, Copper,  
uses 9022-96-2, Poly(n-butyl titanate) 25038-59-9,  
Polyethylene terephthalate, uses 41246-22-4,  
3-Methoxybutyronitrile  
RL: TEM (Technical or engineered material use); USES (Uses)  
(structures and materials for dye sensitized solar cells)

IT 12597-68-1, Stainless steel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wire; structures and materials for dye sensitized solar cells)

L88 ANSWER 12 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:394834 HCAPLUS

DOCUMENT NUMBER: 138:389155

TITLE: Layered composites with metal sheets and  
thermoplastic polymer interlayer with  
wire-type reinforcement

INVENTOR(S): Braekevelt, Geert; Dekeyser, Willem; Lefever,  
Ignace; Lokere, Erwin; Van Giel, Frans

PATENT ASSIGNEE(S): N.V. Bekaert S.A., Belg.

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

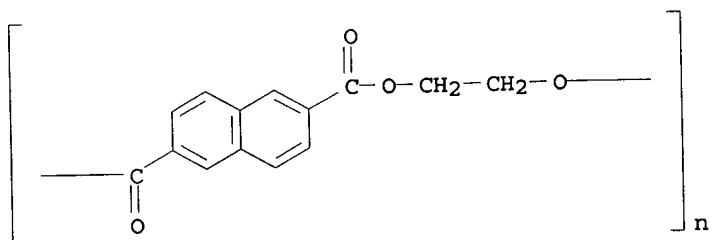
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1312468	A1	20030521	EP 2001-204422	2001 1119
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004229533	A1	20041118	US 2003-438212	2003 0515
PRIORITY APPLN. INFO.: EP 2001-204422				A 2001 1119

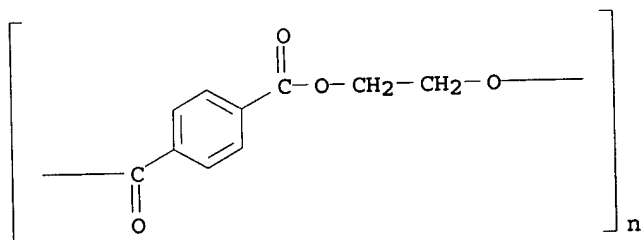
- AB The layered composites include: (a) metal or alloy sheet for top and/or bottom layer; (b) thermoplastic resin interlayer as the binder; and (c) reinforcing wires, fibers, or ribbons in the resin interlayer. The metal reinforcement in thermoplastic interlayer is optionally based on woven mesh or grid typically precoated for increased adhesion to the binder. The bonding interlayer is optionally based on thermoplastic elastomer or vulcanized rubber. The metal or alloy sheets are nominally 10-20,000  $\mu\text{m}$  thick. The layered composites typically show vibration damping, bending formability, and impact resistance, and are suitable for automotive and building panels. The typical composite is manufactured from the top and bottom Al sheets 200  $\mu\text{m}$  thick with the polyamide bonding interlayer reinforced in the center with a steel-wire fabric nominally 300  $\mu\text{m}$  thick.
- IT 7440-50-8, Copper, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (composites with; layered composites with metal sheets and polymer interlayer with wire reinforcement)
- RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

- IT 24968-11-4, Polyethylene naphthalate 25038-59-9, Polyethylene terephthalate, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (interlayer, composites with reinforced; layered composites with metal sheets and polymer interlayer with wire reinforcement)
- RN 24968-11-4 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-2,6-naphthalenediylcarbonyl) (9CI) (CA INDEX NAME)



- RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



- IC ICM B32B015-08  
 CC 56-4 (Nonferrous Metals and Alloys)  
 Section cross-reference(s): 38

ST multilayer metal composite polymer binder wire reinforcement;  
aluminum multilayer composite polyamide binder **steel**  
**wire reinforcement**

IT 7429-90-5, Aluminum, uses 7440-32-6, Titanium, uses  
7440-50-8, **Copper**, uses 11106-93-7  
12597-68-1, Stainless steel, uses 42611-06-3 65442-43-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(composites with; layered composites with metal sheets and  
polymer interlayer with wire reinforcement)

IT 9002-86-2, Polyvinyl chloride 9002-88-4, Polyethylene  
9003-07-0, Polypropylene 9003-53-6, Polystyrene 9003-56-9,  
Acrylonitrile-butadiene-styrene copolymer **24968-11-4**,  
Polyethylene naphthalate **25038-59-9**,  
**Polyethylene terephthalate**, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(interlayer, composites with reinforced; layered composites  
with metal sheets and polymer interlayer with wire  
reinforcement)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L88 ANSWER 13 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2003:133552 HCAPLUS  
DOCUMENT NUMBER: 138:171632  
TITLE: Wear-resistant hoses  
INVENTOR(S): Hatanaka, Susumu  
PATENT ASSIGNEE(S): Yokohama Hydrex Co., Ltd., Japan  
SOURCE: PCT Int. Appl., 20 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003014610	A1	20030220	WO 2002-JP7970	2002 0805

W: JP, KR, US  
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,  
IE, IT, LU, MC, NL, PT, SE, SK, TR

PRIORITY APPLN. INFO.: JP 2001-237695 A  
2001  
0806

AB Title hoses consecutively consist of inner tubes, reinforcer  
layers, outer tubes, and thermoplastic rubber-based covering  
layers containing thermoplastic matrix resins (preferably having  
tensile modulus of  $\leq 100$  MPa) and 0.2-6% (preferably)  
dispersed silicones. A 0.6% dispersed SP 110 (ethylene-  
methacrylate copolymer-grafted silicone)-containing PBT-PTMG copolymer  
matrix was used as the above covering along with a nitrile rubber  
inner tube, a **steel wire** reinforcer, a SBR  
outer tube, and an isocyanate adhesive to form a hose showing  
adhesion between the SBR and covering layer of 10 kN/m and  
abrasion resistance index 20% higher than a hose prepared similarly  
using nylon tape as the covering.

IC ICM F16L011-10  
CC 39-15 (Synthetic Elastomers and Natural Rubber)  
IT Thermoplastic rubber  
RL: TEM (Technical or engineered material use); USES (Uses)  
(covering; wear-resistant rubber hoses containing dispersed  
silicone-containing **polyester** matrix-made

- thermoplastic rubber coverings)
- IT Polysiloxanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (di-Me, poly(ethylene-vinyl acetate)-, graft, SP 110  
 (siloxane); wear-resistant rubber hoses containing dispersed  
 silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT Nitrile rubber, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (inner tube of hose; wear-resistant rubber hoses containing  
 dispersed silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT Adhesives  
 (isocyanato, for outer tubes and coverings; wear-resistant  
 rubber hoses containing dispersed silicone-containing **polyester**  
 matrix-made thermoplastic rubber coverings)
- IT Polyesters, properties  
 RL: PRP (Properties); TEM (Technical or engineered material use);  
 USES (Uses)  
 (low tensile modulus; wear-resistant rubber hoses containing  
 dispersed silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT Styrene-butadiene rubber, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (outer tube of hose; wear-resistant rubber hoses containing  
 dispersed silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT Hoses  
 (wear-resistant rubber hoses containing dispersed silicone-containing  
**polyester** matrix-made thermoplastic rubber  
 coverings)
- IT 106159-00-6  
 RL: PRP (Properties); TEM (Technical or engineered material use);  
 USES (Uses)  
 (low tensile modulus; wear-resistant rubber hoses containing  
 dispersed silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT 9003-18-3  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (nitrile rubber, inner tube of hose; wear-resistant rubber  
 hoses containing dispersed silicone-containing **polyester**  
 matrix-made thermoplastic rubber coverings)
- IT 24937-78-8D, Ethylene-vinyl acetate polymer, graft polymers with  
 polysiloxanes  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (rubber; wear-resistant rubber hoses containing dispersed  
 silicone-containing **polyester** matrix-made  
 thermoplastic rubber coverings)
- IT 9003-55-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, outer tube of hose; wear-resistant  
 rubber hoses containing dispersed silicone-containing **polyester**  
 matrix-made thermoplastic rubber coverings)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L88 ANSWER 14 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:5536 HCAPLUS

DOCUMENT NUMBER: 138:57123

TITLE: Thermoplastic resin laminates with having  
 binding layers containing electric  
 resistance-heat generating materials and  
 heat-conductive materials and their  
 preparation

INVENTOR(S): Chang, Hong-Geun; Kang, Jung-Sook; La,

PATENT ASSIGNEE(S): Mi-Hyang  
 SOURCE: S. Korea  
 U.S. Pat. Appl. Publ., 11 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003003317	A1	20030102	US 2002-175008	2002 0620
KR 2002096479	A	20021231	KR 2001-35023	2001 0620
CN 1393336	A	20030129	CN 2002-124819	2002 0620
JP 2003048268	A2	20030218	JP 2002-179813	2002 0620
JP 3710766	B2	20051026		
US 2005205203	A1	20050922	US 2005-123186	2005 0506
PRIORITY APPLN. INFO.:			KR 2001-35023	A 2001 0620
			US 2002-175008	B3 2002 0620

AB The laminate comprises an exterior layer (e.g., toughened polyolefin/foaming polypropylene/polypropylene triple layer sheet), a base layer (e.g., glass fiber-containing propylene copolymer), and a binding layer placed between the exterior layer and the base layer, wherein the binding layer contains  $\geq 1$  material selected from elec. resistance-heat generating materials and heat-conductive materials, and has  $\geq 1$  connection terminal at a certain region for supplying at least one of electricity or heat (e.g., stainless steel wire mesh). The resin-laminated structures have good properties such as adhesive strength between a base layer and an exterior layer, recycling utility, surface quality in feeling, thermal durability, acoustic absorptivity, heat-shielding property, and impulse-durability. Therefore, the laminates are useful for interior automotive trims, acoustic absorptive members, heat-insulating members, lagging members, protective coating members, anti-vibration members, and sound-blocking members for civil engineering and construction, anti-vibration and sound-blocking members for sewage and water pipe, soundproofing members for hot-water "ondol", plastic furniture, various multi-layer mats, handles, sofas, chairs, various toys, middle soles of shoes, and golf bags.

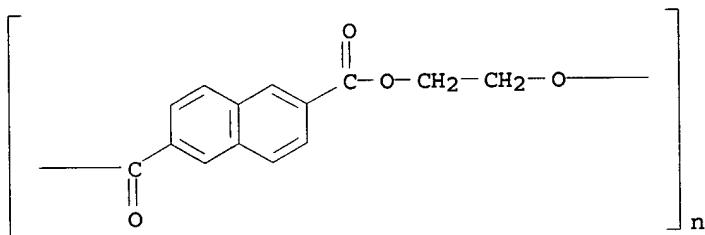
IT 7440-31-5, Tin, uses  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (binding layer containing; manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)

RN 7440-31-5 HCAPLUS

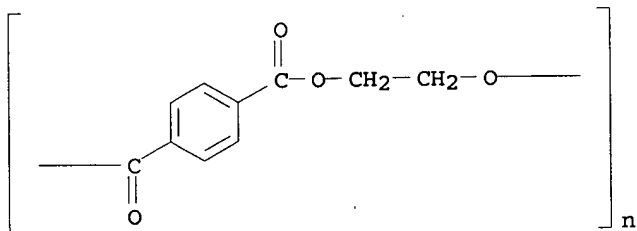
CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

IT 24968-11-4, Poly(ethylene naphthalate) 25038-59-9  
 , Poly(ethylene terephthalate), uses 26062-94-2,  
 Poly(butylene terephthalate)  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical  
 process); TEM (Technical or engineered material use); PROC  
 (Process); USES (Uses)  
 (manufacture of thermoplastic resin laminates with having binding  
 layers containing elec. resistance-heat generating materials and  
 heat-conductive materials)  
 RN 24968-11-4 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-2,6-naphthalenediylcarbonyl)  
 (9CI) (CA INDEX NAME)



RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



RN 26062-94-2 HCAPLUS  
 CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI)  
 (CA INDEX NAME)

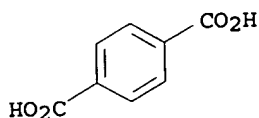
CM 1

CRN 110-63-4  
 CMF C4 H10 O2

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

CM 2

CRN 100-21-0  
 CMF C8 H6 O4



- IT 7440-50-8, **Copper**, uses  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (mesh, binding layer containing; manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)
- RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)
- Cu
- IC ICM B32B015-08  
 INCL 428558000; 428461000; 428463000; 428209000  
 CC 38-3 (Plastics Fabrication and Uses)  
 IT Nonwoven fabrics  
 Paper  
 Plastic films  
 Wood  
 (exterior layer containing; manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)
- IT **Coating materials**  
 Leather substitutes  
 Liquid crystals, polymeric  
 Toys  
 (manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)
- IT 7429-90-5, **Aluminum**, uses 7439-89-6, **Iron**, uses 7439-92-1, **Lead**, uses 7439-95-4, **Magnesium**, uses 7439-96-5, **Manganese**, uses 7439-98-7, **Molybdenum**, uses 7440-02-0, **Nickel**, uses 7440-21-3, **Silicon**, uses 7440-22-4, **Silver**, uses 7440-31-5, **Tin**, uses 7440-32-6, **Titanium**, uses 7440-33-7, **Tungsten**, uses 7440-43-9, **Cadmium**, uses 7440-47-3, **Chromium**, uses 7440-48-4, **Cobalt**, uses 7440-66-6, **Zinc**, uses 7440-67-7, **Zirconium**, uses  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (binding layer containing; manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)
- IT 79-10-7D, **Acrylic acid**, polymers with polyolefin 9002-84-0, **Polytetrafluoroethylene** 9002-85-1, **PVDC** 9002-88-4, **Polyethylene** 9003-53-6, **Polystyrene** 9003-54-7, **Acrylonitrile-styrene copolymer** 9011-14-7, **Poly(methyl methacrylate)** 9020-73-9, **Poly(ethylene naphthalate)** 9041-80-9, **Polyphenylene ether** 24937-78-8, **EVA** 24968-11-4, **Poly(ethylene naphthalate)** 24968-12-5, **Poly(butylene terephthalate)** 25038-59-9, **Poly(ethylene terephthalate)**, uses 25038-71-5, **Ethylene-tetrafluoroethylene copolymer** 25067-34-9, **Ethylene-vinyl alcohol copolymer** 26062-94-2, **Poly(butylene terephthalate)** 106107-54-4  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical

process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)

IT 7440-50-8, Copper, uses 12597-68-1, Stainless steel, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (mesh, binding layer containing; manufacture of thermoplastic resin laminates with having binding layers containing elec. resistance-heat generating materials and heat-conductive materials)

L88 ANSWER 15 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:601932 HCAPLUS  
 DOCUMENT NUMBER: 137:174992  
 TITLE: Flexible tubes with good elasticity and durability for endoscopes  
 INVENTOR(S): Abe, Hironao  
 PATENT ASSIGNEE(S): Asahi Optical Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002224018	A2	20020813	JP 2001-28515	2001 0205

PRIORITY APPLN. INFO.: JP 2001-28515  
 2001  
 0205

AB The flexible tubes consist of a tube formed from coiled strips, a net tube formed from thin wires, at least one of which has a coating layer of organic-inorg. composites containing urethane elastomers and SiO<sub>2</sub>, and a skin layer. A solution containing an alkoxysilyl-terminated urethane elastomer (prepared from isocyanate-terminated polyester-polyurethane prepolymer, isophorone diamine, and 3-aminopropyltriethoxysilane), MS 51 (tetramethoxysilane condensate), and p-toluenesulfonic acid was applied on a stainless steel wire to give a coated wire. A tube formed from stainless steel strips was covered with a net formed from the coated wire and uncoated stainless steel wires to give a tube core, and Resamine P 1045 (thermoplastic polyester-urethane elastomer) was extruded onto the tube core to give a flexible tube showing good elasticity, good adhesion between the skin layer and the core layer, and high durability.

IC ICM A61B001-00  
 ICS F16L011-04; G02B023-24

CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 39, 55

L88 ANSWER 16 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:377822 HCAPLUS  
 DOCUMENT NUMBER: 136:387099  
 TITLE: Metal-thermoplastic laminate and its application in covered wire and laminated steel panel



INVENTOR(S): Otsuka, Yoshihiro  
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002144472	A2	20020521	JP 2000-343861	2000 1110

PRIORITY APPLN. INFO.: JP 2000-343861  
 2000  
 1110

AB Title laminate, which is useful as a substitute to PVC-based material in making covered iron wire and resin-laminated steel panel for home-electronics, is obtained by laminating or covering a metal sheet with a thermoplastic composition comprising 100 parts of a thermoplastic resin, such as a polyester resin, and 3-70 parts of an epoxidized diene polymer having an oxirane oxygen content of 0.5-4.0 weight%.

IT 26062-94-2  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

RN 26062-94-2 HCAPLUS  
 CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI)  
 (CA INDEX NAME)

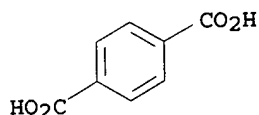
CM 1

CRN 110-63-4  
 CMF C4 H10 O2

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

CM 2

CRN 100-21-0  
 CMF C8 H6 O4



IC ICM B32B015-08  
 ICS B32B015-08; C08L067-00; C08L101-00; C23C026-02; C08L063-08

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 56

IT Coils  
 (metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

IT Laminated plastics, uses

**Polyesters, uses**

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT Polymer blends

RL: TEM (Technical or engineered material use); USES (Uses)

(metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT Polyester rubber

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(thermoplastic, Pelprene P 90; metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT 7439-89-6, Iron, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(Zn-plated, coil; metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT 106107-54-4DP, Butadiene-styrene block copolymer, epoxidized

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT 12597-69-2, Steel, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

## IT 24968-12-5, Duranex 600FP 25640-14-6, PET G 6763

26062-94-2 425669-39-2, Vylon 173  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(metal-thermoplastic laminate and its application in covered wire and laminated steel panel)

L88 ANSWER 17 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:241264 HCAPLUS

DOCUMENT NUMBER: 136:264260

TITLE: Wire reinforced thermoplastic composite layers and load bearing structures

INVENTOR(S): Tunis, George

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 25 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	
US 2002037409	A1	20020328	US 2001-947681	2001 0905
CA 2356724	AA	20020306	CA 2001-2356724	2001 0905
WO 2003033246	A1	20030424	WO 2001-IB1944	2001

1017

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1438181 A1 20040721 EP 2001-974610

2001  
1017

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2004121137 A1 20040624 US 2003-732383

2003  
1210

PRIORITY APPLN. INFO.: US 2000-230483P P

2000  
0906

2001  
0905

2001  
1017

US 2001-947681 A3

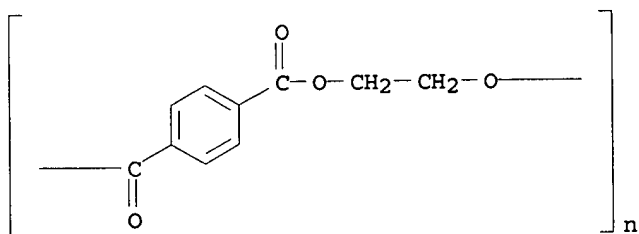
WO 2001-IB1944 W

AB A structural reinforcing layer is made from wire, a structural reinforcing composite layer made from wire, and the resulting load bearing structures are made from or retrofitted with wire reinforced plastics and cements. Said layers and structures made from monofilament metallic or pre-cured composite materials twisted into multi-strand wire geometry optimized to mech. shear load into rigid thermoplastic, thermoset, metallic or cementitious resin systems. Wire geometry, count, size and strength/stiffness can be varied in combination with resin type, sheet structure, permeability and orientation to create layers intended for use in composite and cement based structures as originally molded reinforcement or retrofitted structural upgrades.

IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wire reinforced thermoplastic composite of)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanedioxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IT 7440-50-8, Copper, uses 12597-69-2,  
Steel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wire; wire reinforced thermoplastic)

composite)  
RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 12597-69-2 HCAPLUS  
CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM D02G003-00  
ICS B32B027-12

INCL 428375000

CC 38-3 (Plastics Fabrication and Uses)

IT Polyester fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(knitted fabric with copper and steel  
wire; wire reinforced thermoplastic  
composite)

IT 9002-84-0, Teflon 9002-86-2, PVC 9002-88-4, Polyethylene  
9003-07-0, Polypropylene 25038-59-9, Poly(ethylene  
terephthalate), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wire reinforced thermoplastic composite of)

IT 7440-50-8, Copper, uses 12597-69-2,  
Steel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(wire; wire reinforced thermoplastic  
composite)

L88 ANSWER 18 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2000:790218 HCAPLUS  
DOCUMENT NUMBER: 133:324308  
TITLE: Acidic bath free of nitric acid for pickling  
of stainless steel articles in the presence of  
chloride ions  
INVENTOR(S): Negri, Dario; Giordani, Paolo Bruno  
PATENT ASSIGNEE(S): Henkel Kommanditgesellschaft auf Aktien,  
Germany; Acciai Speciali Terni S.p.A.;  
Thyssenkrupp Acciai Speciali Terni S.p.A.  
SOURCE: Eur. Pat. Appl., 11 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1050605	A2	20001108	EP 2000-109339	2000 0502
EP 1050605	A3	20020206		
EP 1050605	B1	20041027		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
IT 99MI0943	A1	20001103	IT 1999-MI943	1999 0503
IT 1312556	B1	20020422		
US 6554908	B1	20030429	US 2000-560982	2000 0428

AT 280851	E	20041115	AT 2000-109339	2000 0502
PT 1050605	T	20050228	PT 2000-109339	2000 0502
ES 2231070	T3	20050516	ES 2000-109339	2000 0502
PRIORITY APPLN. INFO.:			IT 1999-MI943	A 1999 0503

AB The bath for acidic pickling of stainless steels and similar alloys at nominally 20-70° contains H<sub>2</sub>SO<sub>4</sub> 50-200, HF (as free acid) 0-60, F<sup>-</sup> anion (total) 5-150, SO<sub>4</sub><sup>2-</sup> anion (total) 50-350, Fe<sup>3+</sup> ≥15, chloride anion as accelerator at 0.1-10 g/L, and an effective oxidizer (especially stabilized H<sub>2</sub>O<sub>2</sub>). The acidic pickling bath is controlled with the oxidizer for the Fe<sup>3+</sup>/Fe<sup>2+</sup> content ratio of ≥0.2, and the redox potential at 230-800 mV, using the bath stirred for uniformity. The pickled surface of stainless steel is preferably passivated in aqueous acidic bath containing H<sub>2</sub>SO<sub>4</sub> or H<sub>3</sub>PO<sub>4</sub> at 20-50, HF 0-10, and H<sub>2</sub>O<sub>2</sub> 2-15 g/L (or alkaline persulfate). The austenitic stainless steel (304L) wire was pickled for 20-40 min in the acidic bath at 60° stirred with bottom-blown air, and showed a stable bright surface in the presence of NaCl for chloride accelerator at ≤0.6 g/L, vs. borderline overpickling at 6 g chloride/L and a poor finish on the pickled surface after storage for 40 m.

IC ICM C23G001-08

CC 55-6 (Ferrous Metals and Alloys)

IT Pipes and Tubes

#### Wires

(stainless steel, pickling of; acidic bath free of HNO<sub>3</sub> for pickling of stainless steel in presence of chloride)

L88 ANSWER 19 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:657895 HCAPLUS

DOCUMENT NUMBER: 133:224111

TITLE: Thermoplastic polyester elastomer mandrels and manufacture of high-pressure rubber hoses using them  
INVENTOR(S): Kobayashi, Koji; Gyobu, Shoichi; Ide, Nobuhiro; Nakayama, Seiji  
PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 2000254925	A2	20000919	JP 1999-61385	1999 0309

PRIORITY APPLN. INFO.:	JP 1999-61385	1999 0309
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AB Title mandrels comprise polyester elastomers having crystallization m.p. y° [y ≥ 200 + 0.5x; x = content of hard segment (weight%)], Vicat softening temperature z° (z ≥ 50 + 1.5x),

and elongation 100%. The hoses are manufactured by applying raw materials for rubber inner layers and raw materials for reinforcement fiber layers on the mandrels, molding, and hot vulcanizing. Thus, cyclohexanedimethanol-di-Me terephthalate-HP 1000 (hydrogenated dimer diol)-polytetramethylene glycol block copolymer rubber with x 65%, y 259°, and z 213°, pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate], pentaerythritol tetrakis(3-laurylthiopropionate), 2-(3-tert-butyl-5-methyl-2-hydroxyphenyl)benzotriazole, bisphenol A, and Ph3P were mixed, pelletized, dried, and extruded to give a mandrel showing good flexibility and high heat resistance.

IT 12597-69-2, Steel, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (wires, reinforcement; polyester elastomer mandrel with high heat resistance for manufacture of high-pressure hoses)  
 RN 12597-69-2 HCAPLUS  
 CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM B29C033-40  
 ICS B29C035-02; B29D023-00; C08G063-181; C08G063-199;  
 C08G063-672; C08J005-00; C08L067-02; B29K021-00; B29K105-24;  
 B29L023-00  
 CC 39-15 (Synthetic Elastomers and Natural Rubber)  
 ST polyester elastomer mandrel heat resistance; cyclohexanedimethanol polyester rubber mandrel heat resistance; hose polyester elastomer mandrel heat resistance; high pressure hose polyester rubber mandrel; steel wire reinforced hose polyester rubber mandrel  
 IT Hoses  
 (high-pressure, steel wire-reinforced; polyester elastomer mandrel with high heat resistance for manufacture of high-pressure hoses)  
 IT 12597-69-2, Steel, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (wires, reinforcement; polyester elastomer mandrel with high heat resistance for manufacture of high-pressure hoses)

L88 ANSWER 20 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓

ACCESSION NUMBER: 2000:430158 HCAPLUS  
 DOCUMENT NUMBER: 133:77382  
 TITLE: Steel wire with multilayer corrosion-resistant coating  
 INVENTOR(S): Morimitsu, Masayuki  
 PATENT ASSIGNEE(S): Tokyo Rope Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	----	-----	
JP 2000178774	A2	20000627	JP 1998-361229	1998 1218
PRIORITY APPLN. INFO.:			JP 1998-361229	1998 1218

AB A wire is coated with a Zn-(6.0-12.0%) Al alloy layer and then

with a thermoplastic polyester resin film baked onto the outer surface of the alloy layer. The thickness of the resin layer is preferably 50-200  $\mu\text{m}$ . In the manufacturing process, the alloy coating is air-shot blasted prior to coating with the polyester by an electrostatic powder coating method. The wire has improved corrosion resistance.

IC ICM C23F015-00  
ICS C23C028-00; C23F011-00; C09D005-08  
CC 55-6 (Ferrous Metals and Alloys)  
Section cross-reference(s): 42  
ST **steel wire** coating aluminum zinc alloy  
thermoplastic polymer corrosion  
IT Coating materials  
(anticorrosive; **steel wire** with multilayer  
corrosion-resistant coating)  
IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coating containing; **steel wire** with multilayer  
corrosion-resistant coating)  
IT Coating materials  
(multilayer; **steel wire** with multilayer  
corrosion-resistant coating)  
IT **Wires**  
(**steel wire** with multilayer  
corrosion-resistant coating)  
IT 9017-34-9, Ethylene glycol-isophthalic acid-terephthalic acid  
copolymer, SRU 24938-04-3, Ethylene glycol-isophthalic  
acid-terephthalic acid copolymer 53209-11-3 278596-36-4  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coating containing; **steel wire** with multilayer  
corrosion-resistant coating)  
IT 12597-69-2, **Steel**, processes  
RL: PEP (Physical, engineering or chemical process); TEM  
(Technical or engineered material use); PROC (Process); USES  
(Uses)  
(**steel wire** with multilayer  
corrosion-resistant coating)

L88 ANSWER 21 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:421367 HCAPLUS

DOCUMENT NUMBER: 133:46795

TITLE: **Steel wires** precoated with  
a metal interlayer and polymer for a  
**bright surface**

INVENTOR(S): Adriaensen, Ludo; Leplae, Alain; Van Loo,  
Gilbert; Vandewalle, Gerard

PATENT ASSIGNEE(S): N. V. Bekaert S. A., Belg.

SOURCE: PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2000036177	A1	20000622	WO 1999-EP9718	1999 1209

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN,  
CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM,  
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,  
LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA,  
UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,  
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN,  
TD, TG

BR 9916217	A	20010911	BR 1999-16217	1999 1209
EP 1141436	A1	20011010	EP 1999-958182	1999 1209
EP 1141436	B1	20031126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002532294	T2	20021002	JP 2000-588421	1999 1209
AT 255172	E	20031215	AT 1999-958182	1999 1209
EP 1380402	A2	20040114	EP 2003-101506	1999 1209
EP 1380402	A3	20040303		
EP 1380402	B1	20051019		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
ES 2212654	T3	20040716	ES 1999-958182	1999 1209
AT 307016	E	20051115	AT 2003-101506	1999 1209
PRIORITY APPLN. INFO.:				
			EP 1998-204259	A 1998 1215
			EP 1999-958182	A3 1999 1209
			WO 1999-EP9718	W 1999 1209

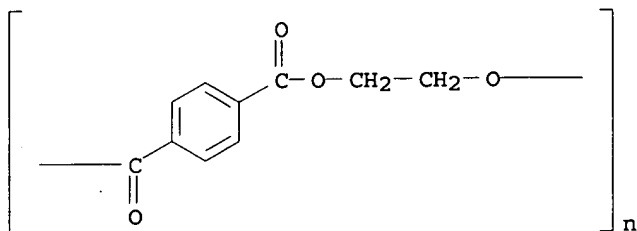
AB **Steel wires are coated for surface brightness with: (a) metal or alloy interlayer, especially Zn; and (b) transparent polymer layer selected from thermoplastic polyesters, polyimides, polyamides, and polycarbonates, optionally with organic coloring dye. The interlayer coating is selected from Cu, Zn, Ni, Sn, or their alloys, and is typically applied by hot-dip melt coating of the steel wire followed by brightening and the polymer coating. The low-C steel wire is drawn to the intermediate diameter of 3.0 mm, hot-dip galvanized with Zn, and drawn wet in aqueous soap solution to 1.2 mm diameter with the associated brightening of Zn, followed by coating with polyethylene terephthalate layer 35 µm thick that is stable in bending the wire.**

IT **25038-59-9, Polyethylene terephthalate, uses 26062-94-2, Polybutylene terephthalate**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coating with; steel wires coated with metal interlayer and transparent



polymer for bright surface)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)

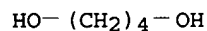
RN 26062-94-2 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI)  
(CA INDEX NAME)

CM 1

CRN 110-63-4

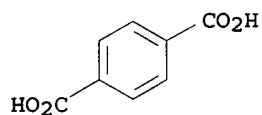
CMF C4 H10 O2



CM 2

CRN 100-21-0

CMF C8 H6 O4



IT 7440-31-5, Tin, uses 7440-50-8,

Copper, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(interlayer, coating with; steel  
wires coated with metal interlayer and  
transparent polymer for bright  
surface)

RN 7440-31-5 HCAPLUS

CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 12597-69-2, Steel, uses

RL: DEV (Device component use); USES (Uses)  
 (wire, coating of; steel  
 wires coated with metal interlayer and  
 transparent polymer for bright  
 surface)

RN 12597-69-2 HCAPLUS

CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C23C002-38

ICS C23C002-26; C23C028-00; B05D007-20; B29C047-02

CC 55-6 (Ferrous Metals and Alloys)

Section cross-reference(s): 42

ST steel wire metal interlayer polymer  
 coating; zinc brightening steel wire  
 coating polymer

IT Wires

(bright finish on; steel wires  
 coated with metal interlayer and transparent  
 polymer for bright surface)

IT Polyamides, uses

Polycarbonates, uses

Polyesters, uses

Polyimides, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(coating with; steel wires  
 coated with metal interlayer and transparent  
 polymer for bright surface)

IT Plastics, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(thermoplastics, clear, coating with;  
 steel wires coated with metal  
 interlayer and transparent polymer for bright  
 surface)

IT Galvanized steel

RL: TEM (Technical or engineered material use); USES (Uses)

(wire, coating of; steel  
 wires coated with metal interlayer and  
 transparent polymer for bright  
 surface)

IT 9002-86-2, Polyvinyl chloride 25038-59-9,

Polyethylene terephthalate, uses

26062-94-2, Polybutylene terephthalate

RL: TEM (Technical or engineered material use); USES (Uses)

(coating with; steel wires  
 coated with metal interlayer and transparent  
 polymer for bright surface)

IT 7440-02-0, Nickel, uses 7440-31-5, Tin, uses

7440-50-8, Copper, uses 7440-66-6, Zinc, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(interlayer, coating with; steel  
 wires coated with metal interlayer and  
 transparent polymer for bright  
 surface)

IT 12597-69-2, Steel, uses

RL: DEV (Device component use); USES (Uses)

(wire, coating of; steel  
 wires coated with metal interlayer and  
 transparent polymer for bright  
 surface)

REFERENCE COUNT:

8

THERE ARE 8 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L88 ANSWER 22 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:167277 HCAPLUS

DOCUMENT NUMBER: 132:201129  
 TITLE: Electromagnetic shielding mesh filter and plasma display panel equipped with the filter  
 INVENTOR(S): Hasegawa, Hideki; Kokame, Akiyoshi; Onda, Satoshi  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

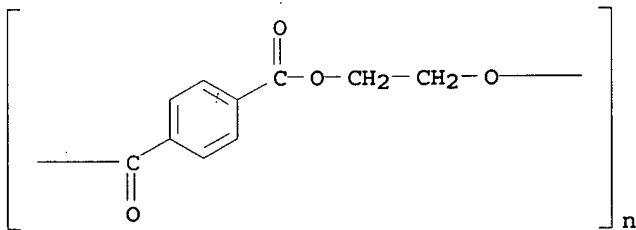
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000077888	A2	20000314	JP 1998-248267	1998 0902

PRIORITY APPLN. INFO.: JP 1998-248267  
 1998 0902

AB In the filter comprising a laminate of knitted or woven mesh fabric and  $\geq 1$  transparent glass or polymer substrate, the mesh fabric is made of 15-40  $\mu\text{m}$ -diameter metal wire with a blackened surface and  $\geq 1$  of the substrate shows  $\geq 50\%$  average transmittance at 400-650 nm and  $\leq 30\%$  at 850-1000 nm. Also claimed is a plasma display panel in which the above filter is placed so that angle of vertical or horizontal direction of the pixels to the direction of longitudinally or horizontally arranged metal wires is 15-25°. The filter shows sufficient electromagnetic-shielding effect with high transparency to visible light and near-IR-shielding effect.

IT 25038-59-9, Poly(ethylene terephthalate), uses  
 RL: DEV (Device component use); USES (Uses)  
 (ITO-coated, laminate, filter substrate;  
 electromagnetic shielding metal mesh filter for plasma display panel)

RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanedioxydicarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



IT 7440-50-8, Copper, uses  
 RL: DEV (Device component use); USES (Uses)  
 (wire, surface-blackened by nickel plating; electromagnetic shielding metal mesh filter for plasma display panel)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IC ICM H05K009-00  
ICS G02B001-10; G02B005-22; G09F009-313; H01J011-02

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **Polyesters**, uses  
RL: DEV (Device component use); USES (Uses)  
(ITO-coated, laminate, filter substrate; electromagnetic shielding metal mesh filter for plasma display panel)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: DEV (Device component use); USES (Uses)  
(ITO-coated, laminate, filter substrate; electromagnetic shielding metal mesh filter for plasma display panel)

IT 50926-11-9, ITO  
RL: DEV (Device component use); USES (Uses)  
(PET film coated with, laminate, filter substrate; electromagnetic shielding metal mesh filter for plasma display panel)

IT 7440-02-0, Nickel, uses  
RL: DEV (Device component use); USES (Uses)  
(copper wire with blackened surface by nickel plating; electromagnetic shielding metal mesh filter for plasma display panel)

IT 7440-50-8, Copper, uses  
RL: DEV (Device component use); USES (Uses)  
(wire, surface-blackened by nickel plating; electromagnetic shielding metal mesh filter for plasma display panel)

IT 11107-04-3, SUS 316 11109-50-5, SUS 304 12597-68-1, Stainless steel, uses  
RL: DEV (Device component use); USES (Uses)  
(wire, surface-blackened; electromagnetic shielding metal mesh filter for plasma display panel)

L88 ANSWER 23 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:865667 HCAPLUS

DOCUMENT NUMBER: 123:347141

TITLE: The influence of marine environments on metals and fabricated coated metal products, freely exposed and partially sheltered

AUTHOR(S): King, George A.; O'Brien, David J.

CORPORATE SOURCE: Division Building Construction & Engineering (DBCE), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Highett, 3190, Australia

SOURCE: ASTM Special Technical Publication (1995), STP 1239(Atmospheric Corrosion), 167-92  
CODEN: ASTTA8; ISSN: 0066-0558

PUBLISHER: American Society for Testing and Materials

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Corrosivity surveys have demonstrated that in Australia marine environments represent by far the main corrosion hazard to metals and coated metal products. Also field inspection of some com. product has revealed cases of significant early corrosion in unwashed areas. Existing published data on the relative performance of metals and prepainted coated metals, especially as fabricated building products, is inadequate to meet the needs of those faced with decisions regarding product selection. A ten-year industrially funded project was initiated to address this by studying the comparative performance of generic classes of metal products and alternative finishes, and this paper presents some interim results. Twenty-two com. products based on galvanized steel, 5% and 55% aluminum-zinc coated steel, stainless steels and aluminum, were obtained from five countries,

some prepainted with acrylic, polyester, silicon-modified polyester (SMP), or polyvinylidene difluoride (PVDF) topcoats, and two with a polyvinyl fluoride (PVF) or polyvinyl chloride (PVC) film laminate. All were fabricated into "bent" specimens, the test piece designed to simulate the types of distress metal products encountered during manufacture and building. Initial microcracking at bends and Erichsen domes was recorded photographically. A complex aluminum extrusion in four finishes was also exposed and measurements of initial color and gloss were made for all specimens. Materials exposed for mass loss measurements include "mild" steel, low-alloy copper-steel, zinc, 5% and 55% aluminum-zinc coated steel, and "wire-on-bolt" assemblies. Specimens are exposed at three marine sites (severe, moderate and mild) both in the open and under a shelter designed to permit deposition of salt and particulates but prevent rainwashing. A glass canopy roof enables some UV degradation of the organic coatings. After one year the shelters have produced a remarkable deterioration of the coated steel products at the severe and moderate sites, the sheltered corrosion rates being up to seven times those in the open. Of the three coatings, the 55% aluminum-zinc consistently has the lowest corrosion rate which on average is about one-third that of zinc. Strong relationships were established between the corrosion rates and the measured levels of airborne chloride.

CC 56-10 (Nonferrous Metals and Alloys)

ST galvanized steel corrosion marine environment; aluminum zinc coating steel corrosion

IT Galvanized iron and steel

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(marine environment effect on metals and fabricated coated metal products, freely exposed and partially sheltered)

IT Acrylic polymers, processes

Polyesters, processes

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(marine environment effect on metals and fabricated coated metal products, freely exposed and partially sheltered)

IT 42611-25-6, Aluminum 5, zinc 95 52308-11-9

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(coating; marine environment effect on metals and fabricated coated metal products, freely exposed and partially sheltered)

IT 11107-04-3, AISI 316 11109-50-5, AISI 304 11109-52-7, AISI 430 37321-73-6, AA 3004

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(marine environment effect on metals and fabricated coated metal products, freely exposed and partially sheltered)

IT 9002-86-2, Polyvinylchloride 24981-14-4, Ethene, fluoro-, homopolymer 128220-91-7, Ethene, difluoro-, homopolymer

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(marine environment effect on metals and fabricated coated metal products, freely exposed and partially sheltered)

ACCESSION NUMBER: \* 1993:500733 HCAPLUS  
 DOCUMENT NUMBER: 119:100733  
 TITLE: Manufacture of wires from tool  
 steel from powders  
 INVENTOR(S): Abe, Tadashi  
 PATENT ASSIGNEE(S): Hitachi Metals Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05105907	A2	19930427	JP 1991-265698	1991 1015

PRIORITY APPLN. INFO.: JP 1991-265698  
 1991  
 1015

AB The title process comprises (1) pressing and densifying powdered raw materials containing high-speed steels of prescribed compns., (2) hot rolling to give wires and hot drawing in gas atmospheric, (3) removing thin oxide coatings, and (4) cold drawing by  $\geq 50\%$  draft including process annealing. The hot drawing prevents scales generation on the wire surfaces, and the manufacture provides wires with bright surfaces.

IT 12597-69-2P, Steel, uses  
 RL: PEP (Physical, engineering or chemical process); PREP  
 (Preparation); PROC (Process)  
 (wires, high-speed, manufacture of)

RN 12597-69-2 HCAPLUS  
 CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM B22F003-24  
 ICS B21C001-00; B21C009-00; B22F001-00; B22F003-14; C21D008-06  
 CC 55-4 (Ferrous Metals and Alloys)  
 ST steel wire high speed manuf; scale prevention  
 steel wire manuf  
 IT Scale (coating)  
 (oxide, on steels, prevention of, for high-speed steel  
 wires)

IT Wire  
 (steel, high-speed, manufacture of)

IT 12597-69-2P, Steel, uses 149374-37-8P  
 149374-38-9P  
 RL: PEP (Physical, engineering or chemical process); PREP  
 (Preparation); PROC (Process)  
 (wires, high-speed, manufacture of)

L88 ANSWER 25 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓

ACCESSION NUMBER: 1989:538930 HCAPLUS  
 DOCUMENT NUMBER: 111:138930  
 TITLE: Method and bath for phosphating steel, zinc  
 and zinc alloys, and aluminum for cold forming  
 INVENTOR(S): Hosemann, Kurt; Opitz, Reinhard  
 PATENT ASSIGNEE(S): Collardin, Gerhard, G.m.b.H., Fed. Rep. Ger.  
 SOURCE: Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
EP 324395	A1	19890719	EP 1989-100228	1989 0107
EP 324395	B1	19921216		
R: AT, BE, DE, ES, FR, GB, GR, IT, NL, SE				
DE 3800835	A1	19890727	DE 1988-3800835	1988 0114
AT 83509	E	19930115	AT 1989-100228	1989 0107
AU 8928508	A1	19890720	AU 1989-28508	1989 0113
AU 604395	B2	19901213		
BR 8900148	A	19890912	BR 1989-148	1989 0113
US 4944813	A	19900731	US 1989-297155	1989 0113
JP 01219172	A2	19890901	JP 1989-9621	1989 0117
PRIORITY APPLN. INFO.:			DE 1988-3800835	A 1988 0114
			EP 1989-100228	A 1989 0107

AB The aqueous bath contains Ca<sup>2+</sup> 10-40, Zn<sup>2+</sup> 10-40, PO<sub>4</sub><sup>3-</sup> 10-100, NO<sub>3</sub><sup>-</sup> 10-100, organic nitro compds. (m-nitrobenzenesulfonate, nitroguanidine) 0.1-2.0, Ni<sup>2+</sup> 0.01-10, and simple and/or complex F<sup>-</sup> 0.01-10 g/L. The pH of the bath is 2.0-3.8, the ratio of free:total acid is 1:(4-100), and the weight ratio of Zn<sup>2+</sup>:Ca<sup>2+</sup> is 1:(0.5-1.5) and preferably 1:1. The coating is carried out at 30-70° and to an extent of 3-9 g/m<sup>2</sup>. **Steel wires** phosphated in the invention baths and drawn had **bright and shiny surfaces**.

IT 12597-69-2  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (wire, steel, phosphating of, for drawing, bath for)  
 RN 12597-69-2 HCAPLUS  
 CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C23C022-22  
 CC 56-6 (Nonferrous Metals and Alloys)  
 IT Wire  
 (steel, phosphating of, for drawing, bath for)

IT 12597-69-2  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (wire, steel, phosphating of, for drawing, bath for)

L88 ANSWER 26 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:61704 HCAPLUS  
 DOCUMENT NUMBER: 110:61704  
 TITLE: Rapid electrolytic descaling process for stainless steel wire rods  
 AUTHOR(S): Rau, R. H. G.  
 CORPORATE SOURCE: Mukand Iron and Steel Works Ltd., Bombay, India  
 SOURCE: Ironmaking and Steelmaking (1988), 15(4), 202-4  
 CODEN: IMKSB7; ISSN: 0301-9233  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The quality of wire rods obtained through the novel rapid electrolytic descaling is excellent with a clean, smooth, and bright surface without any attack on base metal.  
 CC 55-10 (Ferrous Metals and Alloys)  
 ST stainless steel wire rod descaling; electrolytic descaling stainless steel rod  
 IT Wire  
 (stainless steel rod, electrolytic descaling of)  
 IT Scale (coating)  
 (mill, electrolytic removal of, from stainless steel wire rod)  
 IT 12597-68-1  
 RL: USES (Uses)  
 (wire, stainless steel rod, electrolytic descaling of)

L88 ANSWER 27 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
 ACCESSION NUMBER: 1988:496976 HCAPLUS  
 DOCUMENT NUMBER: 109:96976  
 TITLE: Drawing of wires from chemically pretreated steel rods  
 INVENTOR(S): Nishi, Eiichi; Aso, Fumio; Nakagawa, Hiroyoshi  
 PATENT ASSIGNEE(S): Nihon Parkerizing Co., Ltd., Japan  
 SOURCE: Ger. Offen., 4 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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DE 3737368	A1	19880511	DE 1987-3737368	1987 1104
US 4808245	A	19890228	US 1987-116087	1987 1103
EP 270836	A1	19880615	EP 1987-116218	1987 1104
EP 270836	B1	19910717		
R: AT, BE, CH, DE, ES, FR, IT, LI, NL, SE				
AT 65267	E	19910815	AT 1987-116218	1987 1104
CA 1313994	A1	19930302	CA 1987-551157	1987 1105
JP 63238921	A2	19881005	JP 1987-282062	1987 1110
JP 2510629	B2	19960626		



PRIORITY APPLN. INFO.: JP 1986-265656 A  
1986  
1110

EP 1987-116218 A  
1987  
1104

AB Before soaping for lubrication, a film of aqueous dispersion containing a colloidal Ti compound is applied and dried on the rods for wire drawing. This method results in a **shiny surface**, and does not affect the lubricant or drawing efficiency. Thus, aqueous dispersion of titanyl sulfate was cooled, mixed with Na<sub>2</sub>HPO<sub>4</sub>, and adjusted to pH 8.5 with H<sub>2</sub>SO<sub>4</sub>. The resulting slurry was dried at 100-120° to a moisture content of 1.5%, and then milled and dispersed in water. Rod from SWRCH 62 A-type steel of 4 mm diameter was etched in 15% HCl, rinsed with water, immersed in the dispersion for 1 min, and dried. The coated rod was soaped, and drawn to a diameter of 2 mm at 300 m/min. The wire surface showed a good shine compared with conventionally coated rod method.

IT 12597-69-2  
RL: PEP (Physical, engineering or chemical process); PROC  
(Process)  
(**wire, steel**, rods coated with colloidal titanium compound for drawing of)

RN 12597-69-2 HCAPLUS  
CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C23F017-00  
ICS B21C009-00; C10M103-06; C10M105-22; C23C022-62  
ICI C10M105-22, C10N040-24  
CC 55-11 (Ferrous Metals and Alloys)  
ST wire drawing colloidal coating rod; drawing wire titanium alkali phosphate; phosphate treatment rod drawing wire; **steel** wire drawing rod coating  
IT Lubricants  
(colloidal coating, on **steel** rods for **wire** drawing)  
IT **Wire**  
(**steel**, rods coated with colloidal titanium compound for drawing of)  
IT 7722-88-5  
RL: USES (Uses)  
(colloidal coating from titanyl sulfate and sodium carbonate and, on **steel** rod for **wire** drawing)  
IT 7779-90-0  
RL: USES (Uses)  
(colloidal coating mixture containing, on steel rods for **shiny surface** in wire drawing)  
IT 7558-79-4  
RL: USES (Uses)  
(colloidal coating with titanyl sulfate and sodium carbonate and, on **steel** rods for **wire** drawing)  
IT 7440-32-6D, Titanium, compds.  
RL: USES (Uses)  
(colloidal, coating with, on steel rods for **shiny surface** of drawn wire)  
IT 1592-23-0, Calcium stearate  
RL: USES (Uses)  
(lubricant, soaping with, of colloidal coating on **steel** rods for **wire** drawing)  
IT 12597-69-2  
RL: PEP (Physical, engineering or chemical process); PROC  
(Process)  
(lubricants, colloidal coating, on **steel** rods for

IT wire drawing)  
 12743-67-8, uses and miscellaneous 39345-21-6, uses and  
 miscellaneous 116111-42-3, SWRS 100A, uses and miscellaneous  
 RL: DEV (Device component use); USES (Uses)  
 (wire from, drawing of soaped rod for, surface  
 pretreatment for shiny surface in)  
 IT 12597-69-2  
 RL: PEP (Physical, engineering or chemical process); PROC  
 (Process)  
 (wire, steel, rods coated with colloidal  
 titanium compound for drawing of)

L88 ANSWER 28 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1987:411309 HCAPLUS  
 DOCUMENT NUMBER: 107:11309  
 TITLE: Process for annealing ferrous wire  
 INVENTOR(S): Stanescu, Mircea S.; Weinstein, David J.;  
 Cornelissen, Cornelius W.  
 PATENT ASSIGNEE(S): BOC Group, Inc., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4648914	A	19870310	US 1984-662855	1984 1019
PRIORITY APPLN. INFO.:			US 1984-662855	1984 1019

AB Soot deposits are prevented and residual lubricants are removed  
 when **steel wires** are annealed by: (a) heating  
 in a flowing N atmospheric to .apprx.1320° F to vaporize residues,  
 optionally with addition of hydrocarbon gas to prevent oxidation; (b)  
 cooling the wire to 950-1050° F; (c) addition of O gas to the  
 N atmospheric for removal of C-rich residue by oxidation; and (d) final  
 cooling to obtain a **bright surface** with minor  
 oxidation A **steel wire** can be annealed in a bell  
 furnace in 10-12 h.

IT 12597-69-2  
 RL: PEP (Physical, engineering or chemical process); PROC  
 (Process)  
 (wire, steel, annealing of, as-drawn oxidation  
 for soot removal in)

RN 12597-69-2 HCAPLUS  
 CN Steel (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C21D001-26  
 INCL 148016000  
 CC 55-5 (Ferrous Metals and Alloys)  
 ST **steel wire** annealing lubricant vaporization;  
 soot oxidn **steel wire** annealing  
 IT Controlled atmospheres  
 (annealing in, of **steel wire**, drawing  
 lubricant vaporization in)  
 IT Lubricants  
 Soot  
 (on **steel wire**, annealing with removal of,  
 oxidation in)

IT Wire  
(steel, annealing of, as-drawn oxidation for soot removal in)  
IT 12597-69-2  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(lubricants, on steel wire, annealing with removal of, oxidation in)  
IT 12597-69-2  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(wire, steel, annealing of, as-drawn oxidation for soot removal in)

L88 ANSWER 29 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
ACCESSION NUMBER: 1985:189020 HCAPLUS  
DOCUMENT NUMBER: 102:189020  
TITLE: Wire rope having a durable marker  
INVENTOR(S): Graetz, Reinhard  
PATENT ASSIGNEE(S): Hoechst A.-G. , Fed. Rep. Ger.  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4498282	A	19850212	US 1982-450298	1982 1216
FI 8204333	A	19830619	FI 1982-4333	1982 1216
PRIORITY APPLN. INFO.:		DE 1981-8136921	U	1981 1218

AB Strand markers for the wire rope indicate useful information such as strength, and are durable for extended times at temps.  $\leq 300^\circ$ . The markers are in the form of a polyester film (preferably polyethylene terephthalate [25038-59-9]) carrying an abrasion-resistant impression. The film is in the form of a tape 3-4 mm wide and 50-100 $\mu$  thick wound around a steel wire support element 100-200 $\mu$  diameter in a spirally overlapping manner, and worked into a gap between bundles of strands in the wire rope. The wire core has a tensile strength of 60-75% of the wire rope value.

IC ICM B32B001-00  
ICS B32B015-00; D07B001-06; D02G003-00  
INCL 057218000  
CC 55-13 (Ferrous Metals and Alloys)

L88 ANSWER 30 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1985:117693 HCAPLUS  
DOCUMENT NUMBER: 102:117693  
TITLE: Beryllium in hot-dip galvanizing bath for ferrous alloys  
PATENT ASSIGNEE(S): Sumitomo Electric Industries, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 2 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59205459	A2	19841121	JP 1983-79683	1983 0507
PRIORITY APPLN. INFO.:			JP 1983-79683	1983 0507

AB Hot-dip galvanizing is done in a Zn bath containing 0.05-0.1% Be. Be inhibits oxidation of the bath surface and increases wettability of the bath to give products having a smooth defect-free surface with excellent appearance. The products are useful as wire, bar, tapes, sheet, and tubes. Thus, a steel wire 3.1 mm diameter was pickled, treated with an aqueous solution containing NH<sub>4</sub>Cl and ZnCl<sub>2</sub> for flux coating, and hot-dip galvanized at 25 m/min in a Zn bath containing 0.006% Be. The wire had a smooth bright surface without defects.

IC C23C001-02; C22C018-00

CC 55-6 (Ferrous Metals and Alloys)

ST beryllium addn galvanizing bath steel; wire steel galvanizing bath

IT Wire

(steel, galvanizing of, bath for)

IT Galvanization

(hot-dip, of steel, beryllium in zinc bath for)

L88 ANSWER 31 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1985:96538 HCAPLUS

DOCUMENT NUMBER: 102:96538

TITLE: Thermoplastic or unsaturated polyester injection molding compositions containing electrically conductive fibers

INVENTOR(S): Poetsch, Jan

PATENT ASSIGNEE(S): Audi NSU Auto Union A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 4 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3322016	A1	19841220	DE 1983-3322016	1983 0618
DE 3322016	C2	19860710		
PRIORITY APPLN. INFO.:			DE 1983-3322016	1983 0618

AB Structural parts for electrostatic coating consist of thermoplastic or unsatd. polyesters containing homogeneously distributed, elec. conductive fibers. Stainless steel fibers are suitable.

IC C08J005-00; C08K007-06; C08L067-06; B05D001-04; B05D007-02

CC 37-6 (Plastics Manufacture and Processing)

ST polyester reinforced elec conductive; electrostatic coating

polyester conductive; stainless steel wire  
polyester; steel wire polyester conductive

IT Wire  
(stainless steel, in polyesters for elec. conductivity)

L88 ANSWER 32 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
ACCESSION NUMBER: 1983:202573 HCAPLUS  
DOCUMENT NUMBER: 98:202573  
TITLE: Hot-dip coating with  
zinc-aluminum-tin alloys  
PATENT ASSIGNEE(S): Kobe Steel, Ltd., Japan; Amatei Inc.  
SOURCE: Jpn. Kokai Tokkyo Koho, 2 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57210964	A2	19821224	JP 1981-93501	1981 0617
JP 60057503	B4	19851216	JP 1981-93501	1981 0617

PRIORITY APPLN. INFO.: JP 1981-93501

AB Steel wires are dipped into molten Zn-Al-Sn alloys, and quenched with air after the coated alloy is solidified, to increase the surface luster. Thus, SWRM 6 [59220-32-5] wire was dipped into molten Zn-15 Al-1% Sn [85783-02-4] bath for 20 s, and air-cooled to 100° at 798°/min after the coating solidified, to obtain a smooth and bright surface.

IC C23C001-02; C23C001-04; C23C001-08

CC 55-6 (Ferrous Metals and Alloys)

ST zinc aluminum tin coating steel; wire coating  
steel luster

IT Wire  
(steel, zinc-aluminum-tin alloy on, luster of)

IT Coating process  
(hot-dipping, of steel  
wire, zinc-aluminum-tin alloy for)

IT 59220-32-5, uses and miscellaneous  
RL: USES (Uses)  
(coating of wire from, zinc-aluminum-tin alloy melt for  
hot-dip)

IT 85783-02-4  
RL: USES (Uses)  
(coating with molten, hot-dip, of  
steel wire, luster in)

L88 ANSWER 33 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
ACCESSION NUMBER: 1980:477444 HCAPLUS  
DOCUMENT NUMBER: 93:77444  
TITLE: Bright aluminum-coated steel  
wire  
INVENTOR(S): Kanbe, Ryoze; Fujii, Hidenori  
PATENT ASSIGNEE(S): Kokoku Steel Wire, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54162663	A2	19791224	JP 1978-72497	1978 0614
JP 57007015	B4	19820208	JP 1978-72497	A 1978 0614

PRIORITY APPLN. INFO.:

AB Steel wires having a sorbite structure are hot dipped in molten Al and cold drawn by both dry process drawing and wet process drawing. A Na system metal soap-base lubricant is used in the dry process drawing, while a lubricant containing a metal stearate soap and surfactant is used in the wet process. Thus, a 3.3 mm-diameter SSWRH67B [74433-45-7] steel wire was patented, descaled, dipped in molten Al at 665°, drawn 5 times to 1.73 mm diameter by the dry process, and drawn 4 times to 1.20 mm diameter by the wet process. The wire had a bright Al surface and bend strength of 169.7 kg/mm<sup>2</sup>.

IC B21F019-00; C23C001-08

CC 55-6 (Ferrous Metals and Alloys)

ST aluminum coating steel wire

IT Coating process  
(hot-dip, of steel wire with aluminum)

IT 74433-45-7, uses and miscellaneous  
RL: USES (Uses)  
(coating of wire of, with bright aluminum by hot dipping)

IT 7429-90-5, uses and miscellaneous  
RL: USES (Uses)  
(coating with bright, on steel wire by hot dipping)

L88 ANSWER 34 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:583468 HCAPLUS

DOCUMENT NUMBER: 89:183468

TITLE: Study of possibilities for improvement of the surface quality of steel wire after heat treatment

AUTHOR(S): Ujma, Janina; Blaszczyk, Krystyna; Mazanek, Alicja; Sankowski, Andrzej

CORPORATE SOURCE: Inst. Metall., Tech. Univ. Czestochowa, Czestochowa, Pol.

SOURCE: Zeszyty Naukowe Politechniki Czestochowskiej, Nauki Podstawowe (1976), 19, 55-61  
CODEN: ZNNPA2

DOCUMENT TYPE: Journal

LANGUAGE: Polish

AB The effects of the etching and rinsing technols. on the surface quality of steel [12724-44-6] wire subjected to heat treatment were evaluated. Tests were made on steel wire specimens containing C 0.09, Mn 0.35, Si traces, P 0.018, and S 0.023%, annealed at 830° for <30 s, followed by etching in 10.15% HCl with and without inhibitors, and rinsing. A favorable effect was shown by addition of 10% Rumil (composition: Na metasilicate 37, NaOH 55, and Na tripolyphosphate 8% to the rinsing bath, manifested by a bright, silverlike surface of the specimens after etching and rinsing. Particulars are given of the compns. of the etching and rinsing solns., as well as the parameters of carrying out these

operations.  
 CC 55-6 (Ferrous Metals and Alloys)  
 ST **steel wire** surface quality; etching  
**steel wire**; hydrochloric acid etching  
**steel wire**; sodium salt rinsing **steel**  
**wire**; metasilicate sodium rinsing **steel**  
**wire**; hydroxide sodium rinsing **steel**  
**wire**; polyphosphate sodium rinsing **steel**  
**wire**  
 IT Etching  
 (of **steel wire**, surface quality in relation  
 to)  
 IT **Wire**  
 (**steel**, surface quality in relation to etching and  
 rinsing of)  
 IT 7647-01-0, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (etching by, of **steel wire**, surface quality  
 in relation to)  
 IT 1310-73-2, uses and miscellaneous 6834-92-0 7758-29-4  
 RL: USES (Uses)  
 (rinsing of etched **steel wire** in solns.  
 containing, surface quality in relation to)

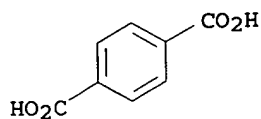
L88 ANSWER 35 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
 ACCESSION NUMBER: 1977:519351 HCAPLUS  
 DOCUMENT NUMBER: 87:119351  
 TITLE: Coating process  
 AUTHOR(S): Anon.  
 CORPORATE SOURCE: UK  
 SOURCE: Research Disclosure (1977), 160, 55 (No.  
 16075)  
 CODEN: RSDSBB; ISSN: 0374-4353  
 DOCUMENT TYPE: Journal; Patent  
 LANGUAGE: English  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RD 160075		19770810		
PRIORITY APPLN. INFO.:			RD 1977-160075	
19770810				
AB	<b>Thermoplastic polyesters</b> , such as poly(tetramethylene terephthalate) [24968-12-5], are suitable for the coating process for <b>steel wire</b> as described in British patent 1,322,114.			
IT	<b>26062-94-2</b> RL: TEM (Technical or engineered material use); USES (Uses) (coatings, for <b>steel wire</b> )			
RN	26062-94-2 HCAPLUS			
CN	1,4-Benzenedicarboxylic acid, polymer with 1,4-butanediol (9CI) (CA INDEX NAME)			
CM	1			
CRN	110-63-4			
CMF	C4 H10 O2			

HO-(CH<sub>2</sub>)<sub>4</sub>-OH

CM 2

CRN 100-21-0  
CMF C8 H6 O4



CC 42-9 (Coatings, Inks, and Related Products)  
ST polytetramethylene terephthalate coating wire; **steel wire coating polyester**  
IT **Wire**  
(coating of **steel**, with **thermoplastic polyesters**)  
IT Coating materials  
(**polyesters, thermoplastic, for steel wire**)  
IT 24968-12-5 **26062-94-2**  
RL: TEM (Technical or engineered material use); USES (Uses)  
(**coatings, for steel wire**)

L88 ANSWER 36 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1977:76898 HCAPLUS  
DOCUMENT NUMBER: 86:76898  
TITLE: Low porosity cast wire  
INVENTOR(S): Dobo, Emerick J.  
PATENT ASSIGNEE(S): Monsanto Co., USA  
SOURCE: Can., 16 pp.  
CODEN: CAXXA4

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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CA 995030	A1	19760817	CA 1973-189056	1973 1228
US 3811850	A	19740521	US 1972-319133	1972 1229
US 3904381	A	19750909	US 1973-422933	1973 1207
ZA 7309625	A	19741127	ZA 1973-9625	1973 1220
NL 7317585	A	19740702	NL 1973-17585	1973 1221
BE 809247	A1	19740628	BE 1973-139388	1973 1228
DE 2364944	A1	19740808	DE 1973-2364944	1973 1228
ES 421852	A1	19760501	ES 1973-421852	1973 1228
AT 7310892	A	19761015	AT 1973-10892	1973



				1228
AT 337232	B	19770627		
SE 389979	B	19761129	SE 1973-17522	1973
				1228
GB 1460750	A	19770106	GB 1973-60086	1973
				1228
DD 108911	C	19741012	DD 1973-175724	1973
				1229
FR 2212197	A1	19740726	FR 1974-76	1974
				0102
JP 49125226	A2	19741130	JP 1974-4572	1974
				0104
IN 138625	A	19760306	IN 1974-CA198	1974
				0130
CA 994982	A2	19760817	CA 1975-237597	1975
				1010
PRIORITY APPLN. INFO.:		US 1972-319133	A	1972
				1229
		US 1973-422933	A	1973
				1207
		CA 1973-189056	A3	1973
				1228

AB Production of small-diameter (<0.8 mm) cast alloy-**steel** wire of porosity  $\leq 0.06$  volume% is described. The porosity is greatly reduced when the **extrusion** is conducted at a high velocities, e.g. >2400 ft/min. Such rates have not been previously attainable, but are achieved by continuous **extrusion** of the melt through a die to form a filamentary jet, passing the jet into a zone occupied by a pressurized gas, passing the jet cocurrently with the pressurized gas through a supersonic nozzle into a zone occupied by an atmospheric capable of causing a film to form around the jet surface by reaction with it, then passing the jet through a converging passageway into a 2nd zone occupied by the film-forming atmospheric. For example, 5%-Si steel [11100-68-8] at 1432° was **extruded** through a 9-mil orifice at 1440° by using a head pressure of 80 psig and an attenuating-gas (68:32 CO-He mixture) pressure of 68 psig (melt flow-rate 65 g/min). Wire (4 mils diameter), which was flexible and had a **bright surface** was produced at 3200 ft/min. Likewise 1%-Al steel [12768-43-3] filaments were **extruded** at 3500 ft/min by using Ar at 100 psig and He at 76.8 psig, which contacted the jet at a 90° angle and then flowed cocurrently with it through a supersonic nozzle into a space supplied with CO as the film-forming gas. The enthalpy conversion of the gas as it passes through the plate plays a large role in the rates obtained.

CC 55-11 (Ferrous Metals and Alloys)  
Section cross-reference(s): 69

ST cast **steel wire** nonporous; porosity low  
**steel wire; extrusion steel wire; silicon steel wire** prodn;  
aluminum **steel wire** prodn

IT Cast metals and alloys

RL: USES (Uses)  
(aluminum steels, **extrusion** of low-porosity wire from)  
IT Cast metals and alloys  
RL: USES (Uses)  
(silicon steel, **extrusion** of low-porosity wire from)  
IT **Wire**  
(**steel**, **extrusion** of low-porosity cast)  
IT 630-08-0, uses and miscellaneous 7440-37-1, uses and miscellaneous 7440-59-7, uses and miscellaneous  
RL: USES (Uses)  
(**extrusion** with, in low-porosity cast steel production)  
IT 11100-68-8, uses and miscellaneous 12768-43-3, uses and miscellaneous  
RL: USES (Uses)  
(wire, **extrusion** of low-porosity cast)

L88 ANSWER 37 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1976:511316 HCAPLUS  
DOCUMENT NUMBER: 85:111316  
TITLE: Decarburization free annealing of wire  
AUTHOR(S): Koerber, Guntram; Grohmann, Paul  
CORPORATE SOURCE: Fed. Rep. Ger.  
SOURCE: Gas Aktuell (1974), 8, 15-19  
CODEN: GAAKDX; ISSN: 0340-6067  
DOCUMENT TYPE: Journal  
LANGUAGE: German

AB Factors responsible for decarburization of steel [12597-69-2] during annealing in pure N were studied. Control of decarburization depends on the relative chemical potential of C in the atmospheric compared with that in the steel, which depends on the oxidizing capacity of the protective gas. The thermodyn. of formation and decomposition of CO, CO<sub>2</sub>, H<sub>2</sub>O, and hydrocarbons such as CH<sub>4</sub> [74-82-8] and C<sub>3</sub>H<sub>8</sub> [74-98-6] were analyzed in the C-H-O system to delineate regions having oxidizing, reducing, carburizing, or decarburizing abilities in annealing of steel at ordinary temps. N enriched with small amts. of hydrocarbon vapor gave decarburization-free annealing and a **bright surface**. N + 1.5 volume% CH<sub>4</sub> or 0.5 volume% C<sub>3</sub>H<sub>8</sub> gave optimum results in the annealing of **steel wire** in most cases. Suitable annealing procedures can be developed to give the desired surface conditions by varying the composition of the N-hydrocarbon mixture with the initial surface conditions and the work load.

CC 55-5 (Ferrous Metals and Alloys)  
Section cross-reference(s): 69  
ST decarburization annealing **steel wire**  
IT **Wire**  
(**steel**, decarburization-free annealing of)

L88 ANSWER 38 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1976:497748 HCAPLUS  
DOCUMENT NUMBER: 85:97748  
TITLE: Flux-cored welding wire for gas-shielded electric arc welding  
INVENTOR(S): Ballass, John T.; Georgetti, Richard A.  
PATENT ASSIGNEE(S): Unicare, Inc., USA  
SOURCE: U.S., 4 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3935421 A 19760127 US 1974-514195

1974  
1011

PRIORITY APPLN. INFO.:

US 1970-53016

A2

1970  
0707

US 1972-250240

A2

1972  
0504

AB A novel flux-cored welding wire for CO<sub>2</sub>-shielded elec. arc welding of structural steel has a **shiny**, metallic-appearing **surface** on a low-C steel sheath. The core flux contains ferromanganese [12604-53-4] 6-20, ferrosilicon [8049-17-0] 6-20, MnO 1-20, a fluoride (NaF, K-Al fluoride, etc.) 0.5-5% and the balance rutile [1317-80-2]. The wire is especially useful in out-of-position welding to produce sound welds combining good strength and high notch toughness at subzero temps.

IC B23K

INCL 219146000

CC 55-10 (Ferrous Metals and Alloys)

ST **wire welding structural steel; flux welding wire steel**

L88 ANSWER 39 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1975:595403 HCAPLUS

DOCUMENT NUMBER: 83:195403

TITLE: **Polyethylene terephthalate plastic-coated wire**

INVENTOR(S): Van Vlaenderen, Robert

PATENT ASSIGNEE(S): N. V. Bekaert S. A., Belg.

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 3893642	A	19750708	US 1973-336469	

1973  
0228

PRIORITY APPLN. INFO.:

US 1971-108355

A2

1971  
0121

AB Poly(ethylene terephthalate) (I) [25038-59-9]-  
**coated steel wire** was manufactured by heating the wire to an elevated temperature, passing the heated wire through a heated and pressurized **extrusion** zone in which molten I was coated on the heated wire, and cooling the coated wire at a rate sufficient to maintain I primarily (≥95%) in the amorphous state. The product was useful in the manufacture of barbed wire, wire mesh, etc.

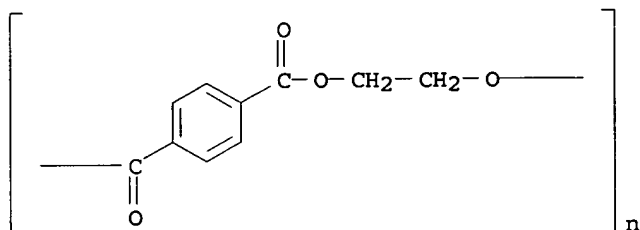
IT 25038-59-9, uses and miscellaneous

RL: USES (Uses)

(coating with, of **steel wire**)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IC B21B  
 INCL 245002000  
 CC 42-9 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 55  
 ST **steel wire polyester coating;**  
**polyethylene terephthalate coating**  
 wire  
 IT **Wire**  
 (coating of **steel**, with poly(ethylene terephthalate))  
 IT Coating process  
 (of **steel wire**, with poly(ethylene  
 terephthalate))  
 IT 25038-59-9, uses and miscellaneous  
 RL: USES (Uses)  
 (coating with, of **steel wire**)

L88 ANSWER 40 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓

ACCESSION NUMBER: 1974:537697 HCAPLUS  
 DOCUMENT NUMBER: 81:137697  
 TITLE: **Polyethylene terephthalate**  
 plastic coated wire  
 INVENTOR(S): Van Vlaenderen, Roger  
 PATENT ASSIGNEE(S): N. V. Bekaert S. A.  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

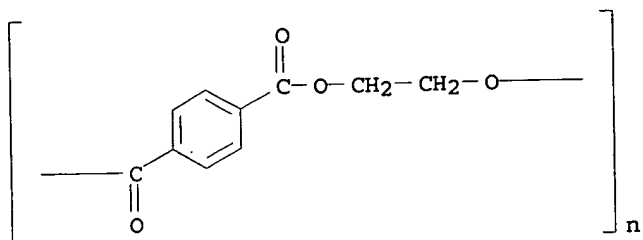
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3829545	A	19740813	US 1973-336799	1973 0228

PRIORITY APPLN. INFO.: US 1971-108355 A3  
 1971  
 0121

AB A plastic-coated wire was prepared by heating the wire to be coated to an elevated temperature, passing the heated wire through an extension zone maintained at an elevated temperature and pressure in which a polyester plastic in molten condition was coated on the heated wire, and cooling the coated wire at a rate sufficient to maintain the plastic primarily in the amorphous state. Thus, a **steel wire** was coated with **polyethylene terephthalate [25038-59-9]** in which the coating was .geq.80% amorphous and 0.1-0.3 mm thick. The improved wire product could be used for barbed wire, wire mesh, wire netting, wire fences, etc.

IT 25038-59-9, uses and miscellaneous  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coatings, on wire)  
 RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanediyloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
(CA INDEX NAME)



IC B29F  
INCL 264174000  
CC 42-9 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 55  
ST **polyethylene terephthalate coating**  
wire; polyester coating **steel wire**  
IT 25038-59-9, uses and miscellaneous  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, on wire)

L88 ANSWER 41 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1974:85970 HCAPLUS  
DOCUMENT NUMBER: 80:85970  
TITLE: High vacuum as the last step in the  
development of bright annealing  
AUTHOR(S): Nikolic, Miroslav  
CORPORATE SOURCE: Jesenice, Yugoslavia  
SOURCE: Zelezarski Zbornik (1973), 7(3), 131-9  
CODEN: ZEZZBQ; ISSN: 0372-8633  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: Slovenian  
AB A review with 8 refs. is given on obtaining a **bright**  
**surface** of the products after heat treatment or annealing  
for cold-working in metal processing, especially in wire drawing.  
CC 55-0 (Ferrous Metals and Alloys)  
IT **Wire**  
(steel, bright annealing for drawing of)

L88 ANSWER 42 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1973:87539 HCAPLUS  
DOCUMENT NUMBER: 78:87539  
TITLE: Annealing of coiled wire rod under a  
controlled atmosphere  
AUTHOR(S): Schmidt, Th.  
CORPORATE SOURCE: Ludwig-Ofag-Indugas, Essen, Fed. Rep. Ger.  
SOURCE: Gaswaerme International (1972), 21(10), 460-4  
CODEN: GWINAT; ISSN: 0020-9384  
DOCUMENT TYPE: Journal  
LANGUAGE: German  
AB The reactions of steels of various C contents with a CO-containing gas  
atmospheric were studied in a wide temperature range using Fe-C-gas phase  
diagram. The combinations were determined of steels with different  
compos. which can and those which cannot be annealed together.  
The use of recarburizing and protective gases is discussed.  
Several types of furnaces are described, including continuous  
furnaces, which are used to anneal coiled wire rod with a  
**bright surface**.  
CC 55-5 (Ferrous Metals and Alloys)  
IT Protective atmospheres  
(annealing in, of coiled **steel wire rods**  
for surface decarburization prevention)

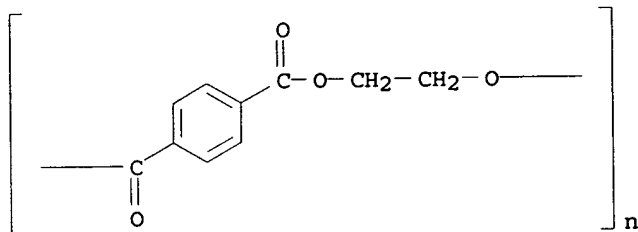
IT Wire  
(steel, annealing of coiled rod for, in controlled  
atms.)

L88 ANSWER 43 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
ACCESSION NUMBER: 1972:463519 HCAPLUS  
DOCUMENT NUMBER: 77:63519  
TITLE: Poly(ethylene terephthalate) coating for  
steel wire  
PATENT ASSIGNEE(S): N. V. Bekaert S. A.  
SOURCE: Fr. Demande, 11 pp.  
CODEN: FRXXBL  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2077389	A1	19711022	FR 1971-2230	1971 0122
FR 2077389	A5	19711022		
FR 2077389	B1	19731228		
NL 7001315	A	19710802	NL 1970-1315	1970 0129
NO 135740	B	19770214	NO 1970-4935	1970 1223
BE 761408	A2	19710616	BE 1971-2777	1971 0111
SE 368170	B	19740624	SE 1971-708	1971 0121
CA 956426	A1	19741022	CA 1971-103295	1971 0121
CH 530261	A	19721115	CH 1971-530261	1971 0128
ES 387739	A1	19730516	ES 1971-387739	1971 0128
AT 7100722	A	19750315	AT 1971-722	1971 0128
AT 326899	B	19760112		
BR 7100701	A0	19730510	BR 1971-701	1971 0129
GB 1322114	A	19730704	GB 1971-20657	1971 0419
PRIORITY APPLN. INFO.:			NL 1970-1315	A 1970 0129

AB Steel wires were coated with a crack resistant  
amorphous coating by preheating the wire to 150.deg., coating with  
extruded molten poly(ethylene terephthalate) [25038-59-9]  
at 260.deg., and cooling with water. When the steel  
wire was not preheated before coating, the crack  
resistance was low.

IT 25038-59-9, uses and miscellaneous  
 RL: USES (Uses)  
 (coating with, on preheated steel  
 wires, crack-resistant)  
 RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



IC B29D; B29F  
 CC 42-9 (Coatings, Inks, and Related Products)  
 ST crack resistance coating wire; polyethylene terephthalate  
 extrusion wire  
 IT Coating process  
 (of preheated steel wire, with polyethylene  
 terephthalate, crack-resistant)  
 IT 25038-59-9, uses and miscellaneous  
 RL: USES (Uses)  
 (coating with, on preheated steel  
 wires, crack-resistant)

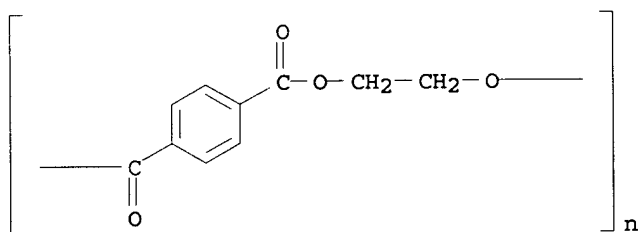
L88 ANSWER 44 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN ✓  
 ACCESSION NUMBER: 1969:5038 HCAPLUS  
 DOCUMENT NUMBER: 70:5038  
 TITLE: Conversion thermoplastic-  
 polyester to thermosetting resins  
 PATENT ASSIGNEE(S): Goodyear Tire and Rubber Co.  
 SOURCE: Brit., 4 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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GB 1127509		19680918	GB 1966-53396	1966 1129
DE 1595787			DE	
FR 1507122			FR	
US 3446758		19690527	US	
				1966 0112
PRIORITY APPLN. INFO.:			US	
				1966 0112

AB Low-mol. weight waste fractions and waste or defective batches from  
 polycondensation processes are heated with polyols containing  
 ≥3 OH groups, giving useful, thermosetting  
 polyester resins. Thus, 38.4 parts low-mol.-weight  
 poly(ethylene terephthalate), prepared from di-Me terephthalate and  
 ethylene glycol (I) in the presence of Zn(OAc)2 and Sb2O3, was

mixed with 6.44 parts glycerol under N, stirred, and heated in a 280° bath, giving a **clear**, homogenous melt in <10 min. The melt was heated in a 245° bath while the pressure in the reactor was reduced to 1 mm. over 25 min. Under these conditions, the melt was polycondensed with the evolution of I, giving a **polyester** having a lowered intrinsic viscosity in .apprx.10 min. The **polyester** was rapidly cooled to 24°, ground, placed in a fluidized-bed apparatus, and fluidized at 24° with a stream of N. A **steel wire** was heated to 245°, inserted in the fluidized bed, and withdrawn when a **coating** of the **polyester** adhered to the wire. After 30 min. at 245° in a forced air oven, a crosslinked, insol., infusible **coating** with good elec.-insulating properties was obtained. A mixture of the cis and trans isomers of 1,4-bis(hydroxymethyl)cyclohexane was also used as a monomer.

IT 25038-59-9, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking of waste, with polyhydric alcs.)  
 RN 25038-59-9 HCAPLUS  
 CN Poly(oxy-1,2-ethanediylloxycarbonyl-1,4-phenylenecarbonyl) (9CI)  
 (CA INDEX NAME)



IC C08G  
 CC 37 (Plastics Fabrication and Uses)  
 ST **polyesters** crosslinked elec **coatings**;  
**coatings** elec crosslinked **polyesters**; glycerol  
 terephthalate polymers; terephthalate glycerol polymers; insulators  
 elec polyterephthalate  
 IT **Polyesters**, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking of waste, with polyhydric alcs.)  
 IT Crosslinking  
 (of **polyester** wastes with polyhydric alcs.)  
 IT 56-81-5, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking of **polyester** wastes with dihydric alcs.  
 and)  
 IT 105-08-8  
 RL: USES (Uses)  
 (crosslinking of **polyester** wastes with glycerol and)  
 IT 25038-59-9, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking of waste, with polyhydric alcs.)

L88 ANSWER 45 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1966:474055 HCAPLUS  
 DOCUMENT NUMBER: 65:74055  
 ORIGINAL REFERENCE NO.: 65:13863f-h  
 TITLE: Cables with bonded filamentary insulation  
 INVENTOR(S): Morieras, Gilbert  
 PATENT ASSIGNEE(S): Societe Rhodiaceta  
 SOURCE: 3 pp.  
 DOCUMENT TYPE: Patent



LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3265809		19660809	US 1964-338570	1964 0120
				1963 0129

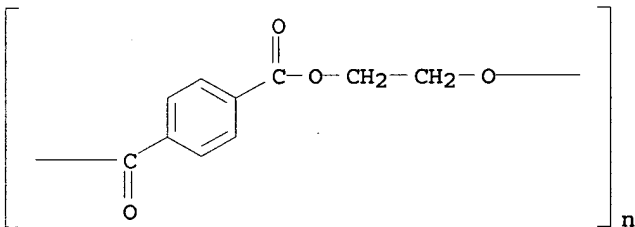
PRIORITY APPLN. INFO.: FR

AB The title cables consist of a core of elec. conductor or steel rope surrounded by parallel yarns of polyester and an overall fibrous braid all suitably bonded. E.g., 170 high-tenacity poly(ethylene terephthalate) yarns (1000 denier/200 filaments) (I) and a 7-wire Cu conductor (3-mm. overall diameter) are passed through a rubber latex compound containing fungicides and curatives. With a suitable perforated disk and sizing die, this assembly is formed into a circular cross section with the Cu strand in the center. Next, an overall braid of I is applied and the cable formed is pulled through a solution of a vulcanizable chlorosulfonated polyethylene compound and cured 5 min. at 50-130°. The diameter of the finished cable is 6.5 mm. A steel rope may be used instead of the Cu strand if the cable is used as a loadcarrying member.

IT 25038-59-9, Terephthalic acid, polyethylene ester (braided textiles and parallel yarns from cables with elec. insulators from)

RN 25038-59-9 HCAPLUS

CN Poly(oxy-1,2-ethanedioxycarbonyl-1,4-phenylenecarbonyl) (9CI) (CA INDEX NAME)



INCL 174121000

CC 47 (Textiles)

IT Rubber, substitute and synthetic (Hypalon, textiles impregnated with, elec. insulators from, for cables and coverings for steelwire ropes)

IT Nylon (as covering for steel-wire ropes)

IT Textiles (cables and steel-wire ropes with elec. insulators or coverings from parallel yarns and braided)

IT Yarns (cables and steel-wire ropes with elec. insulators or coverings from textile braids and parallel)

IT Ropes (steel-wire, coverings for, from parallel yarns and braided textiles)

- IT Rubber  
(textiles **coated** or impregnated with, for elec.  
insulators for cables and **coverings** for steelwire  
rope)
- IT 25038-59-9, Terephthalic acid, polyethylene ester  
(braided textiles and parallel yarns from cables with elec.  
insulators from)

L88 ANSWER 46 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1944:27030 HCAPLUS  
DOCUMENT NUMBER: 38:27030  
ORIGINAL REFERENCE NO.: 38:3944g-i  
TITLE: Glass-processing **wire** and  
**steel** products  
AUTHOR(S): Caugherty, John J.  
SOURCE: Wire and Wire Products (1944), 19, 299-303  
CODEN: WWPRAE; ISSN: 0043-6003  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB New methods for the elimination of acids in cleaning methods are  
used in hot-rolling, cold-drawing and galvanizing, and in  
heat-treatments such as annealing, or patenting, with deoxidation  
in one continuous operation. In passing cleaned wire through a  
bath of molten glass, the coating deposited on the steel surface  
provides a satisfactory insulation, since when the coating  
separates at temps. below oxidation temps. it removes any oxides  
formed with it; this produces a **bright** cleaned  
**surface**, heat-treated in the same operation. While at  
present the process is applied only to wire products it seems  
likely that all grades of strip, sheet and bar steel might be  
similarly treated. Rod rolling, galvanizing, annealing, patenting  
(spring steel), and Pb-coated stainless steel annealing are  
briefly considered.

CC 9 (Metallurgy and Metallography)

IT Galvanization  
(glass-processing **steel** products and **wire**  
in)

IT Glass  
(**steel** product and **wire** passage through  
molten)

L88 ANSWER 47 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1928:11429 HCAPLUS  
DOCUMENT NUMBER: 22:11429  
ORIGINAL REFERENCE NO.: 22:1374b-e  
TITLE: The effects of polarization upon the  
**steel wire**-nitric acid model  
of nerve activity  
AUTHOR(S): Bishop, G. H.  
SOURCE: Journal of General Physiology (1927), 11,  
159-74  
CODEN: JGPLAD; ISSN: 0022-1295  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable

AB In a short length of **steel wire** passivated in  
65% HNO<sub>3</sub> and observed under the influence of a polarization  
current, 80% of the total p. d. drop occurs at the anode and 20%  
at the cathode. The change from active to passive states as  
measured by p. d. change is very abrupt in comparison with the  
duration of activity. Duration of the refractory state (to  
stimuli) is decreased at the anode and increased at the cathode as  
in nerve. This fact is contrary to the view that reactivity after  
passivation results from partial reduction of an oxide layer.  
Soft Fe wire passivated by anodal polarization becomes  
repassivated after activation in acid of a concentration which fails to  
passivate it originally. It can be stimulated several times with

complete repassivation and with a very short refractory phase as compared with **steel wire**. Finally it becomes continuously active. The alternation between a dark brown oxide coat during activity and a clean, **bright surface** during passivation is very sharp in Fe wire. A passive **steel wire** in acid has many characteristics of an inert electrode like Pt; superimposed upon the primary passivation potential there is probably an oxidation-reduction potential equilibrium between the constituents of the solution. The nerve-like reactivity of this system probably involves an alternation between two protective coatings of the **steel wire**: (1) a brown oxide coat received mechanically by the wire during activity, which may be removed by gas convection or rapid solution of the oxide in which case passivation does not take place; (2) a second coat of oxide may form under conditions of intense oxidation in the interstices of the first and cover the surface as the first coat dissolves off. This furnishes the protection for passivation which is followed by the attainment of electrode equilibrium with the solution

CC 11A (Biological Chemistry: General)  
IT Nerves  
(activity of, effects of polarization on **steel wire**-HNO<sub>3</sub> model of)

L88 ANSWER 48 OF 48 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1920:19590 HCAPLUS

DOCUMENT NUMBER: 14:19590

ORIGINAL REFERENCE NO.: 14:3682h-i,3683a-d

TITLE: The recovery of transmissivity in passive iron wires as a model of recovery processes in irritable living systems. I

AUTHOR(S): Lillie, Ralph S.

CORPORATE SOURCE: Clark Univ.

SOURCE: Journal of General Physiology (1920), 3,

107-28

CODEN: JGPLAD; ISSN: 0022-1295

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The activation of passive iron wires immersed in solns. of HNO<sub>3</sub> of a certain critical concentration is a temporary one followed immediately by a return to the passive state. When the activation is started at any region of a passive wire, it is transmitted rapidly along its whole course; each region as it becomes active, activates the adjoining area and then becomes passive again. In this behavior, the wire resembles such irritable and conducting living elements as a nerve fiber or muscle cell. As in the living system, the maintenance of chemical activity in a passive wire immersed in sufficiently strong HNO<sub>3</sub> requires a constant repetition of stimulation, in this case by an activating substance like Zn. The analogy of this behavior to the excitation process in irritable living tissues is discussed at some length. For the expts. detailed in this article, music **steel wires** were used. They were allowed to react in 1.2 sp. gr. HNO<sub>3</sub> for 15 sec., then passivated by placing in HNO<sub>3</sub> of 1.42 sp. gr. The passive wires were then **steel-bright** and underwent no further change if kept in dilute HNO<sub>3</sub>. If activated by touching with Zn or scraping with glass, there was an immediate darkening at the **bright surface**, followed by active effervescence which spread rapidly along the wire. A completely transmissive wire reacted as a whole in a definite manner, independent of the mode of activation, but dependent on the concentration of acid and the temperature. The reaction continued indefinitely in acid of 1.2 sp. gr. or below, but in stronger acid came rapidly to rest and passivity was regained. The duration of the local reaction in this case varied with the concentration of acid. After the return of passivity, the wire was more positive than

before by 0.01-0.02 volt. The distance activation, transmitted along a wire, depended upon the time interval between the new activation and the previous activation. With acid of 65 volume % and a temperature of 20-21°, transmission for an indefinite distance was accomplished after a 4-min. interval. For stronger acid the time increased rapidly with increasing concentration. At a temperature of 3° recovery of transmission after activation was 4-5 times slower than at 20°.

CC 11A (Biological Chemistry: General)

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